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This panel discussion had as its objective the consideration of the use of hormones in the treatment of conditions met in everyday practice.

Panel Discussion*

HORMONE THERAPY FROM PEDIATRICS THROUGH GERIATRICS

Moderator: Dr. John C. Burch, Nashville
Panel: Dr. Harold Feinstein, Memphis
Dr. Joe B. Killebrew, Chattanooga
Dr. Addison B. Scoville, Jr., Nashville
Dr. A. H. Lancaster, Knoxville

DR. BURCH: I want to introduce first, the members of our panel. Over here we have Dr. Killebrew of Chattanooga, Dr. Lancaster of Knoxville, Dr. Scoville of Nashville and Dr. Feinstein of Memphis. We have all the grand divisions of our State represented. The specialties represented are: Dr. Killebrew, urologist; Dr. Lancaster, dermatologist; Dr. Scoville, internist; and Dr. Feinstein, obstetrician and gynecologist.

Dr. Scoville, I think we would like to start with you. I saw a lady in my office the other day and I was a little confused about the matter. This lady was 50 years old and one of my colleagues had been giving her 10 mg. of stilbestrol a day. My goodness, that woman was really bleeding and had been bleeding for several weeks. In going back into the history, I found that my colleague had been giving her the stilbestrol because she had a severe pain in the back. Will you straighten us out on this matter?

DR. SCOVILLE: This problem is a more common problem than we ordinarily recognize,—the problem of osteoporosis. Osteoporosis, or diminished bone mass, occurs in over 50 per cent of postmenopausal women. That is, over half of them will have a decreased bone mass as shown by X-ray, about 30 per cent of all of those postmenopausal women will have undisclosed fractures of the vertebra, about 10 per cent will have symptoms from them. Postmenopausal women are not the only ones who develop osteoporosis, but they certainly form the largest majority. As to the method of treatment, the use of estrogens is fine. That dose of estrogen is a little high I think something in the neighborhood of 3 to 5 mg. of diethylstilbestrol a day is perfectly adequate, and we often combine estrogens with androgen therapy. The idea being that we can increase the protein matrix of the bone with androgen, and we decrease the excretion of calcium with estrogen, so that as far as therapy goes, we could cut down a little bit on the stilbestrol but add androgen.

Now, the question of whether the menopause is good for a woman or not is very interesting, because if over 50 per cent of women develop osteoporosis, why does nature give the woman the menopause? I think it is because nature has found that old women can't have satisfactory offspring. The menopause is something that occurs for the benefit of the race, but to the detriment of the individual. I would like to know what Dr. Feinstein thinks about that withdrawal bleeding.

DR. FEINSTEIN: Well, first of all, in a patient of about 50 years of age I think quite probably the bleeding was from withdrawal of stilbestrol, but regardless of that supposition it should be proved beyond the shadow of a doubt that that was what the bleeding was due to. Such a patient should be investigated carefully by all means, to find out if she has carcinoma or not, and she certainly should have the benefit of curettage

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before the beginning of any hormone therapy. I think that is the only comment I have in this particular case.

DR. BURCH: Now, Dr. Feinstein, let's take a 38 year old woman, and this woman had no previous radiation or previous surgery. She has anxiety, sleeplessness, and flight of ideas, difficulty in concentration and lack of confidence, and she cries a good deal and complains of fits of depression. She says she has some occasional hot spells. When we talk about her period, we find that they are all right. Now her physician has been treating her for the pre-menopause with Theelin but she does not seem to be any better. Now, what would you do about this patient? Would you increase the dose of Theelin?

DR. FEINSTEIN: Well, I think this question brings up one of the most common questions that anyone who treats female patients encounters; that is the question of menopausal symptoms and their treatment. First of all, I think it is a pretty well established clinical fact that hormone therapy is very rarely indicated in the menopause. Most women who are going through the menopause can be treated without any hormone therapy whatsoever. Estrogen therapy and androgen therapy are reserved for those rare instances, and they are rare, of uncontrollable hot flushes. I think it is a pretty well established clinical fact that that is the only symptom of the menopause in which hormones are indicated in the way of treatment.

In this particular case, a woman 38 years old who is menstruating regularly, instead of increasing her dosage of estrogen, I would stop it entirely. I don't think it was indicated in the beginning. First of all, it is quite apparent that the woman had an unstable nervous system or emotional make-up, and it is particularly this type of woman who has difficulty when she goes through the change. I think that this type of woman would be better treated with the proper psychologic approach rather than with the use of hormones. Probably the anxiety which is attendant upon this period of life and the apprehension about going through the menopause are more responsible for her symptoms than any hormonal changes in her body. Now if hormones are used at this period in life, I think the combination of estrogen and androgen is far superior to just the use of estrogen alone and usually the combination is in a ratio of twenty of androgen to one of estrogen. Such preparations in that proportion are on the market by reliable drug houses. Again, we have to beware of withdrawal bleeding when we treat these patients at the menopause with hormones. In this particular case, the woman is still menstruating regularly.

If you administer hormones, I think the point that should be remembered particularly is that hormones should be administered cyclically to the female. We have only to look at the normal menstrual cycle and the physiology of menstruation to realize that the blood levels of hormones vary at different times of the cycle. Now, if hormones are given to a woman like this one, they should be given during the first half of the cycle. We know that estrogen and androgen given before the time of ovulation do not influence the next menstrual period, but if they are given postovulatory they may delay and upset the menstrual cycle. But, in this particular case, I would say that quite probably this woman is not going through the menopause at all and certainly does not require any hormone therapy.

DR. BURCH: Well, I rather thought when I saw this case, that this was a pretty good example of a psychoneurotic woman on whom somebody had hung a label of pre-menopause and then failed to treat her. It's a big question about the use of these hormones at the time of the menopause. There's a lot in it that is not entirely clear. Dr. Scoville, is there anything here you would comment on?

DR. SCOVILLE: Yes. There is one thing I would like to disagree with and that was the statement that the only indication for estrogens in the menopausal woman is if she had hot flushes. There has been a lot of talk among a group of doctors who have been interested in the osteoporosis problem. We were talking about preventing osteoporosis by giving every woman small doses of estrogen from menopause on. I am not sure that I fully agree with that thesis, but on the other hand, those patients

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who have been carried on such a regimen seem to have a sense of well-being. They seem to feel better, and I wonder if it might not be worthy of our consideration since the only disadvantage is the question of cancer being induced by estrogens and I know of no case where estrogens have been implicated as the causative factor in the production of a particular carcinoma.

DR. BURCH: Than you, Dr. Scoville. I am afraid we can't go into this question now about whether estrogens are related to cancer or not. I certainly would like to, but if we go into that we never would get anywhere, so I think we are just going to have to by-pass this thing and take Dr. Scoville's remarks as perhaps an indication or a trend which medicine is going to follow in the future.

Now then, following along the same general thought and pattern of giving hormones to elderly people,—let's take the case of a fellow who might be 56 years old, about 5 feet 6 maybe, a nice looking fellow, and this man has depression just like this woman had, and he has inability to sleep. I would emphasize the fact that he had depression, loss of appetite, anxiety and just doesn't feel that he is capable of doing the things that he normally did during the day. He just feels all washed out. Somebody had been treating this man with testosterone. That brings up the question of the male climacteric. What about this, is there anything to this? Is this testosterone treatment right? What about it, Dr. Killebrew, this is your field?

DR. KILLEBREW: Most of the patients that we see come in not complaining of the symptoms Dr. Burch has outlined, but complaining of a certain degree of sexual impotency. Of course, this goes hand in hand with these other symptoms. For some years we have been giving testosterone and even now I haven't been able to properly evaluate the results obtained. I think undoubtedly many men get a reversal of these symptoms and have a sense of well-being, aggression, etc. However, before we ever had testerone, we had other drugs that were supposed to be of benefit. They probably had no physiological action, but in many instances we got results. That partially answers the question. I think the psychological factor probably is very much in ascendency, Dr. Burch. I can't be dogmatic about that because I do feel that some people get benefits from continuous prolonged use of testosterone. I personally have not been able to tell who is getting direct hormonal benefit and who is getting psychological benefit.

DR. BURCH: But you do agree there are benefits.

DR. KILLEBREW: Yes, I think in certain instances, even from personal experimentation. (Laughter.)

DR. BURCH: Well, I think that is an honest answer. Dr. Scoville, do you want to say anything about that. I want your views on this male climacteric.

DR. SCOVILLE: The only thing I have to say is that I am most impressed with the marked depression of these patients who are going through the male climacteric. We have had several men, seen in practice, who admitted to us later that they had been contemplating suicide prior to the administration of testosterone. Not as Dr. Killebrew said because they were sexually impotent but rather because of marked depression relieved by androgen therapy.

DR. BURCH: We knew of a very prominent man who committed suicide not so long ago. I won't mention his name because I don't think that's quite cricket. I asked his physician: "What was the matter with that fellow?" He said, "He had male menopause." Now I don't know whether there is anything to it or not.

DR. KILLEBREW: Dr. Burch, may I interrupt a moment?

DR. BURCH: Of course.

DR. KILLEBREY: Of course, the doctor being an endocrinologist, probably has reference to patients who come in with a variety of complaints, but as a urologist, by far the great majority that I see come because of impotence alone.

DR. BURCH: Impotence?

DR. KILLEBREW: Certain degrees of it.

DR. BURCH: Dr. Lancaster, you haven't said a word.

DR. LANCASTER: I would like to ask the gentleman a question. When they come to the male climacteric—how often does it happen in comparison with women? I am un-

der the impression it is seen about one-sixth as frequently in men as in women.

DR. KILLEBREW: Are you asking me?

DR. LANCASTER: Asking anybody.

DR. BURCH: You answer it, Joe.

DR. KILLEBREW: I don't see women for that complaint. I could not give an honest answer. I do believe that all males to a greater or to a lesser extent go through a psychological or endocrinological phase of menopause, some so imperceptibly that it is not noticed by themselves or anyone around them and some to a marked degree. I think the best illustration of it is the old saying, "You can have it in the dangerous forties" —the last breaths of life, so to speak. Well, man is beginning to wane a little and it is not only his sexual, but other aggressiveness.

DR. LANCASTER: I see there most be a little disagreement when I said it happened about one-sixth as often in males as in females, and I think it happens about five years later than it does in females.

DR. BURCH: Well, I think you are right. It must be a rarer syndrome and it certainly isn't quite as clear-cut, but from what you gentlemen have told me, I believe there may be something to it. Dr. Lancaster, if I am not mistaken, I've known you for a long time. You and I have been friends for a long time and I have always been proud of the great things that you have done. If I am not mistaken, about fifteen or twenty years ago you opened up a real new field in dermatology about sunlight. The effect of sunlight is the cause of eruptions and I saw a friend of mine who had been to Florida. She looked perfectly beautiful. She had one of those mahogany brown faces and her hands were the same. She looked like she had had about a $3,000.00 treatment down in Florida, but when we came to examine her we found an eruption on her body. She was about fifty years old. Would you tell us something about the effect of sunlight on these eruptions and the relationship of hormones?

DR. LANCASTER: Gentlemen, it is an extensive subject, but I will limit the discussion to just a few minutes. Sunlight may produce eruptions beginning at the preschool age on through, and after the menopause due to hormonal imbalance, and can produce eruptions all through life up through 60, 70 and 80. In the latter decades of life the eruption is not due to hormonal imbalance. Then it's more on a metabolic basis, and if we are not careful when we go to dealing with these sunlight eruptions, we will get confused. We will treat something for a sunlight eruption that is not a sunlight eruption due to the hormonal imbalance. Now in the pre-school children back 100 years ago hydroa vacciniforme was recognized as occurring on the exposed surfaces with the sun scarring these children until about the adolescent age after which they would begin to improve. They usually would be cleared up in the late teens. I assume that that is a hormonal deficiency. These children get along all right if their hormonal balance is maintained. Then we go on to a little later in life and the patient Dr. Burch was talking about could fall in that category. But, let's not get too set on estrogen deficiency. I am finding that diabetes is confusing a lot of people. It was my opportunity last summer to pick up four unrecognized cases of diabetes that had sunlight eruption. Two of those patients were treated for pellagra, one for a period of twelve years, one had the typical collar and glove-like dermatitis of pellagra, but these patients were obese and were not emaciated. We can get confused with drugs too. You give a patient sulfonamides to get him over his bronchitis and then send him to Florida. He is more prone to have a sunlight eruption since he had a virus infection treated with the sulfonamide. We found that 35 per cent of the British Air Force stationed in Florida in the last war developed the sunlight eruption. They had been vaccinated for smallpox and while that tape was on, they were given one gram of sulfadiazine a day to keep down upper respiratory infections. So, we can get awfully confused on the sunlight eruption. If it is due to hormonal deficiency, she could be cleared up with estrogen. Is that the answer you want?

DR. BURCH: That's what I want to know. Do you think estrogens would be of any benefit if there is a relationship between the two, and the diagnosis is correct?

DR. LANCASTER: Making the correct diagnosis is the main thing.

DR. BURCH: Now, Dr. Scoville, I was asked to come to our ward rounds in one of the hospitals in which I practice the other day for I had a case that was going to be presented. I got there a little early and they were having an awful argument. Everybody was looking mad and they were arguing about the question of giving cortisone in rheumatoid arthritis, and the selection of cases for treatment. Would you clarify that for us? What cases ought to be treated with cortisone and what cases should not to be? That's what we want to know.

DR. SCOVILLE: Well, I think there are certain rules that should be followed in deciding which cases will respond or should be treated with cortisone or the steroid hormones. First, the active rheumatoid process should be potentially responsive. In other words, the person should not be badly crippled or deformed with contractures because in that type of patient, little will be gained from the use of steroids. Second, there should be failure to respond adequately to general measures such as food, good diet, analgesics and a reduction in articular trauma, etc. Those should not have done the job. A number of patients with rheumatoid arthritis will respond quite well to general measures. Third, and probably the most important, is the psychologic suitability of the patient—the sustained cooperation. The patient should realize that the treatment will be prolonged. It will be suppressive, rather than curative and a reduction of dose may be necessary with incomplete control of symptoms. I think the patient should understand that when you are using hormones for the treatment of rheumatoid arthritis he is going to be treated for a long, long period of time. Lastly, there should be absence of absolute contra-indications which are the presence of active or recently active tuberculosis, psychosis, Cushing's Disease and serious infections in which the organisms can't be controlled, such as polio. Other conditions such as the presence of peptic ulcer, renal insufficiency, etc., are not absolute contra-indications, but certainly give us pause for serious thought.

DR. LANCASTER: Would you consider diabetes mellitus among the contra-indications?

DR. SCOVILLE: No, not necessarily. I think that if a patient has diabetes you should give some thought before using steriods. On the other hand, the very severe rheumatoid arthritic who can't be controlled by other measures should not be deprived of steroid therapy just because he has diabetes. That reminds me of the saying, "You shouldn't let a patient die of one disease or be crippled with one disease because he has another."

DR. BURCH: Dr. Feinstein, if a woman is 48 years old and is bleeding at the menopause, that is irregular bleeding, and being treated with hormones and not doing good, how do you think you ought to re-adjust the treatment? What do you think about the hormonal treatment of bleeding at the menopause? Let's put the question that way.

DR. FEINSTEIN: First of all, this question came up partially awhile ago and was partially answered. In any woman around the menopause, particularly 48 years of age, who is bleeding, the first thought that should arise is the possibility of carcinoma. Of course, a good pelvic and physical examination as well as curettage will rule it out. A woman of this age bleeding irregularly should have a curettage.

Once carcinoma has been ruled out, then how do we treat her with hormones? Again, the treatment would be cyclic therapy, preferably with estrogen and progesterone. We usually administer estrogen by mouth over a period of 20 days, the last 10 days of which progesterone is added to the cycle. Progesterone is given in a dose of about 50 mg. by hypo every 2 or 3 days during the last 10 days of this 20 days of estrogen therapy, or if progesterone is used by mouth, 80 mg. a day should be given. Right here is where one of the biggest mistakes in the use of female sex hormones is made, that is, in the dosage of progesterone. It has been shown that the average woman excretes around 50 mg. of pregnanediol in the urine a day. I think most of us in here remember when progesterone came out in vials of 1, 2, and 3 mg. When we consider the fact that the average woman puts out 50 mg. of pregnanediol a day, we can see about how much effect the administration of 1, 2, and 3 mg. would have. The hypodermic injection of at least 50 mg. every other

day or every third day, or 80 mg. by mouth should be used cyclically until the bleeding is under control.

Now first of all, of course, there should be some routine established. If the patient is bleeding excessively, she has a curettage first, which usually will control functional bleeding, and then you follow the cessation of bleeding with your cyclic therapy over a period of 2 or 3 months. Now if bleeding isn't controlled by the simple cyclic administration of hormones over a period of 2 or 3 months, I think the general feeling among gynecologists over the country is that a well performed hysterectomy is indicated in those women where functional bleeding is not controlled by conservative means. That doesn't mean that every patient who bleeds irregularly at the menopause should have a hysterectomy by any means. I mean those patients who do not respond to this conservative cyclic therapy should have a hysterectomy. Now the question of whether to use androgen or estrogen,—there's no question but what androgen will stop bleeding just as quickly as estrogen will,—but as far as the re-establishment of normal cycles is concerned, estrogen will stop bleeding just as quickly and do a more physiologic job than androgen, and the purpose in the treatment of functional bleeding is to re-establish normal cyclic bleeding. Estrogen in cyclic therapy will do that far better than testosterone.

DR. BURCH: Thank you. We are all mixed up about the treatment of prostatic cancer. Worried about castrating men, putting plastic testicles in them, and giving them estrogen, and all that kind of thing, I know there is something to it, but we want you to tell us about it.

DR. KILLEBREW: Dr. Burch, since this is a discussion of hormonal therapy of prostatic carcinoma, I will preface my remarks by simply stating that early cases of carcinoma of the prostate should be treated that way. We have brought hormones into the therapy of prostatic carcinoma where you have the digital evidence, X-ray evidence of metastases or elevation of the blood phosphatase, in which cases we have to resort to other than surgery for treatment. I would like to say here and now that I know of no place for absolute truth more than in prostatic carcinoma. You must enlist the aid of your patient for continuing therapy the rest of his life, and I think any fear or indecision is bad in handling any case of prostatic carcinoma. As a rule, these patients will have varying degrees of bone pain due to osseous metastases, and it is our practice to relieve the symptoms of the metastatic lesions by administration of estrogens, diethylstilbestrol, natural estrogens, or tace in amounts depending on the patient's response and his tolerance of the drug.

The crux of the treatment is dependent on the cooperation of the patient, and he must know the truth. I have been asked many times: "How do you get them to continue on with stilbestrol when they get sick? So many of my patients will not take it after they begin to feel the effect of the hormone." Then we find that that patient has not been told the entire truth about the diagnosis. If he knows the truth, the mild symptoms that most of them have will be tolerated without a fuss. After the patient has been on stilbestrol therapy or hormonal therapy for a period of time you may feel that he is becoming estrogen-fast, that is, the hormonal therapy is becoming less effective. Then the question of castration comes up. Frankly, I would be very conservative with castration since only a few years ago the diagnosis of cancer of the prostate precluded death from anything other than carcinoma of the prostate. With the advent of hormonal therapy we have been able to prolong comfortably the life of these men—death finally occurring from diabetes, heart disease, etc. So, many of them go along for a long time under perfect control from estrogen therapy without castration. Adrenalectomy should be used only for very selected patients. Does that answer your question?

DR. BURCH: As far as I am concerned. Any questions from you fellows on that? Dr. Lancaster, I want to make you feel very much at home on this next question. I had a pretty little girl the other day, coming from that beautiful little section of country right in the angle of where the Smith Fork comes into the Caney Fork. She had the worst case of acne I had ever seen and

somebody had been painting some sort of estrogen cream on her face. Her mother was worried about what that was going to do to her breasts and menstruation and she brought her down for me to see. Now, I want to know what you think about that kind of treatment. Is that all right?

DR. LANCASTER: I don't think that there is any justification for the use of estrogen preparations locally in acne. However, estrogens do have a place in the treatment of selected cases of acne both in the male and the female and it doesn't necessarily have to be in patients of adolescent age. Some of my most grateful patients are those in their late thirties or pre-climacteric years. But, we cannot depend entirely on estrogen in the proper management of acne from the endocrine standpoint. It depends on the time when the acne appears. If acne flares up at four and five days before the period, then I think progesterone is indicated and, thus, progesterone is also valuable in selected cases of acne. But, I don't like the hormonal preparation for local use that has been on the market for years and years and years.

DR. BURCH: Does that answer your question?

DR. FEINSTEIN: I would just like to cite a case which I had not too long ago which bears out what Dr. Lancaster said about the hormonal effect on acne. I had a patient about 30 years of age who came in complaining of sterility. She was worked up completely from the sterility standpoint to find that there was no particular cause for her sterility other than an ovulatory type of menstruation with a little functional bleeding,—menstrual irregularity. She was put on cyclic therapy for her sterility. This same woman had a severe case of acne when she came in. She had been to various doctors for her acne and had given up on the question of having it cleared up, and was just interested in getting pregnant, but in the process of straightening out her menstrual periods, her acne completely cleared and she got pregnant not too long after that. All during the pregnancy she had no signs of acne and then after her pregnancy the acne came back to a certain extent, not as bad as it was. But then with the next pregnancy she again had no acne whatsoever, which would certainly indicate a hormonal influence.

DR. LANCASTER: May I tell you gentlemen how dangerous it can be to treat acne with hormones. About a month ago I had a long distance telephone call. This man was mad because his wife was pregnant. I had seen her six weeks before and then two weeks before. At the end of the month the acne was clear. She had had it for years. He was wanting to involve me apparently, but I couldn't be involved. (Laughter.) Two weeks later, he came in and apologized. He said: "Well, I was just drunk; that's why I called you."

DR. BURCH: Gentlemen, you have been very patient with us. We are not going to continue this thing indefinitely, but we do have enough time to go around one more time. Dr. Scoville, let's take a lady who has had cortisone for arthritis,—pretty good doses of it too. She comes in, we'll say for cancer of the ovary, or removal of her gallbladder, or resection of the stomach,—a major abdominal operation. What is the danger? Will she have adrenal atrophy as a result of all her cortisone therapy? How should we carry this woman through an operation?

DR. SCOVILLE: That question of adrenal atrophy following prolonged use of cortisone is a very real one. Some patients have died and certainly if a patient has received cortisone within the preceding 6 months, or within the past 2 years if hypocortisonism has been present, that patient should be treated with large doses of cortisone prior to, during, and following the surgical procedure because the additional stress of surgery and anesthesia may precipitate an Addisonian crisis and death. For that reason such a patient should be watched for signs of adrenal insufficiency. No morphine should be given. Saline should be used in the parenteral fluids and the patient should receive large doses, 200 mg., of cortisone intramuscularly 48, 24, and 2 hours before operation. Then, following operation he should be given 100 mg. of cortisone a day with gradual reduction in the dosage on the days following operation. If an emergency operation must be done, intravenous cortisone should be used during the surgical procedure. As more and more of our pa-

tients are maintained on steroid therapy, we must be aware of the potential danger to these patients when they are subjected to the stress of surgery, fractures and anesthesia.

DR. BURCH: Thank you, Dr. Scoville. Dr. Feinstein, in our business we deal with a lot of problems. Women often don't tell you about these things, but if you ask them about it you find that it is a pretty frequent condition, and that is frigidity in the female. What do you think about hormones for frigidity?

DR. FEINSTEIN: Well, this is a rather complex problem from a number of angles. However, as far as the use of hormones for the correction of this very common complaint is concerned (I think that everyone will agree that it is one of the most common complaints found in the female if you question them closely enough), the therapy of it is as difficult as anything that I can think of. If we listen to some of the men who are ballyhooing hormones, they would have us believe that all you have to do is to give a woman a shot of androgen and she immediately becomes a sex maniac. It is that rediculous. Now the etiology of frigidity is complex. Chemicals will not correct a psychogenic condition. The old saying that "sex is largely in the head" is a pretty well established fact, and I don't think that we can correct for a clumsy husband or the improper approach to sex by the use of hormones. That sounds quite obvious, but it's amazing how often we see hormones, androgens, particularly, used indiscriminately for frigidity. I think that the approach to the problem of frigidity goes much deeper than that and we find that it is largely a psychologic thing due to ignorance on the part of the husband, or the wife, or both and usually we will find it particularly on the part of the husband. The problem usually resolves itself into a little bit of education and psychological approach to the problem. Now that doesn't mean that androgen does not have its place and that is where the difficulty has come in. Androgen has a definite effect on protein metabolism. It definitely will increase the sense of well-being in the female as well as in the male. It is true that if a woman who is normal sexually is given androgen, it will certainly increase her sexual desires and capacity. It acts on the genital tract by increasing the size of the clitoris and increases the sensitivity of the lower genital tract, which, in itself, in the woman who is already normal sexually, will naturally increase her sexual capacity. But, the woman who has never experienced satisfactory sexual relations, naturally is not going to be benefitted by androgen. I think the proportion of women in which androgen therapy is necessary for frigidity is a very small proportion of those in which it has been recommended.

DR. BURCH: Dr. Killebrew, one of my relatives came to me the other day about his little boy. This little boy's testicle hadn't gone down and he was wondering about whether the child ought to be operated on or whether the child ought to be treated with some form of medicine. He wanted to know if there was any kind of medicine or hormones or anything like that that would do the child any good. Now this is a right important sort of question. Will you clear us up about that please?

DR. KILLEBREW: Dr. Burch, that's a question that could be discussed at some length, and since you and Dr. Feinstein have afforded me the great pleasure of taking you to the airport on time, I will be short. I know this is a discussion on hormones but I feel that if cryptorchidism is amenable to surgical replacement, it should be done. When the testicle is palpable within the canal, I think surgery should be done and be done early. I don't mean in infancy. You rarely see these cases in infancy. I feel as I did in regard to treatment of the male menopause with testosterone. I feel that hormones do no good in the male. This statement is certainly controversial and there will be those who disagree. I do think this, that if a testicle has not presented itself in the normal position after puberty or in a boy fifteen, sixteen or seventeen years old, even though we bring it down, two things occur. In the first place, there is practically no function. In the second place, that testicle is still much more susceptible to malignant change than the other or than a normal testicle. I think that there are many instances where these testicles are brought down after puberty where

it has been obligatory to go back and remove that testicle. Many testes become atrophic and functionless after hormonal therapy. Frankly I have little confidence in the use of hormones in cryptorchidism.

DR. BURCH: Well, we have one more question and that goes to Dr. Lancaster. That relates to the subject of kraurosis vulvi and its treatment by cortisone ointment.

DR. LANCASTER: You have answered the question I believe partially. That's one place where cortisone ointment is satisfactory in a certain per cent of patients, but I have not depended on it entirely. I use hydrochloric acid internally, and occasionally vitamin A and sometimes vitamin E. May I say that I don't like to use cortisone internally in dermatology except for two conditions, and two conditions only. Those are systemic lupus erythematosus and pemphigus, and it doesn't cure either one. I wish we would quit using so much cortisone in dermatology.

DR. BURCH: Now before I turn this thing over to Dr. Steward, I want to thank everybody on behalf of the panel for their very courteous attention and for the privilege of this panel being here.

Further Observations on the Expectant Management of placenta Previa. Hatten, John Z., Kirkpatrick, Samuel A., and Thornton, A. Newman. Am. J. Obst. & Gynec. 70:1181, 1955.

This group from the University of Virginia evaluated 59 cases of placenta previa of which 24 were treated by expectant management. Expectant management is the delay of diagnostic vaginal examination until definitive treatment is needed. Since prematurity is the greatest hazard to the fetus in placenta previa, the role of expectant management is to improve fetal salvage. The average duration of observation for the 24 cases was 23.2 days. Ten infants weighed more than 2,500 grams and all survived. Of 14 infants weighing less than 2,500 grams, five failed to survive. They believed they were able to carry 7 infants from prematurity to maturity and that the delay of delivery was a factor in the survival of 12 infants. Expectant management is disappointing in some cases due to spontaneous onset of labor and repeated episodes of bleeding. Dr. John S. Fish of Atlanta commented in the discussion that in his experience labor followed the initial episode of bleeding within 24 hours in 35 per cent of cases of placenta previa. Also Dr. Fish pointed out that the stillbirth rate in placenta previa is three times greater than when the bleeding is due to ruptured marginal sinus. This increase is thought to be the result of fetal pressure on the low-lying placenta and cord. This factor should be kept in mind when selecting the proper method for delivery.

CASE REPORT

An Unusual Case of Fistula Formation Following Acute Appendicitis

Leonard W. Edwards, M.D., Daphine Sprouse, M.D., J. Lynwood Herrington, Jr., M.D.,*
Nashville, Tenn.

Although serious complications following acute appendicitis have declined markedly during the past ten years, they are nevertheless still encountered with sufficient frequency to constitute a major problem to the surgeon treating this disease.[1, 3, 5, 9, 10, 12]

This decline may be attributed to a number of factors: including better education of the general public, an increased awareness of the acute disease by the family physician, an aggressive attitude on the part of the surgeon, and the employment of meticulous surgical technic along with the use of antibiotics administered postoperatively in properly indicated circumstances.

The most frequently encountered complications of acute appendicitis, namely: wound infection, abscess formation and peritonitis, have received wide recognition in the surgical literature and need no further elucidation. Less commonly encountered complications include postoperative hemorrhage resulting from insecure ligation of the appendiceal vessels. The resulting hemorrhage may be brisk if arterial in type, with rapidly developing shock. On the other hand, there may be a gradual oozing from an appendiceal vein with a secondary anemia being discovered several days later. In either case treatment consists of immediate laparotomy as soon as a tentative diagnosis is established.

A fecal fistula presents occasionally as a complication. The external type of fistula occurs more often and, according to Boyce,[2] is seen in approximately 0.6 per cent of all cases of acute appendicitis. The process may result from undue manipulative trauma to a badly inflamed cecum or from the prolonged use of drainage tubes producing necrosis of the bowel wall. In neglected cases of acute appendicitis the inflammatory process may, in rare instances, suppurate through the anterior abdominal wall. The presence of a foreign body left in the wound, or the existence of a neoplasm or granuloma in the cecal wall may predispose to fistula formation. An internal fistula, on the other hand, usually results from rupture of the infectious process into an adjacent viscus, usually the cecum or upper rectum, with temporary relief of acute symptoms. Rupture into the urinary bladder is an unusual complication and presents a more serious problem.

Pylephlebitis with embolic liver abscesses is a rare complication,[4, 6, 7, 8, 11] but should be suspected whenever chills and high fever are added to the clinical picture. The treatment of this catastrophe is highly controversial at present, but with perhaps most observers tending to rely on properly selected antibiotics and anticoagulants, rather than venous ligation procedure.

Among the truly rare complications are *Clostridium welchii* infection, gangrene of the abdominal wall and tetanus.

The present report was prompted by the appearance of a patient who not only presented a most unusual complication of appendicitis, but who also proved a complex problem in differential diagnosis.

Case Report

H.B., a 44 year old farmer and industrial worker, was admitted to the hospital February 10, 1954, with the complaint of recurrent drainage from the right groin.

The *present illness* began approximately 12 months before when the patient had an onset of pain in the right lower quadrant, nausea, and fever, which was diagnosed as "intestinal flu." Malaise continued for the next 2 months, bowel movements remained normal, but the lower abdomen was persistently sore and tender. Approximately 2 months following the initial illness, a tender swelling appeared in the right groin, which was incised and drained by the family physician, with prompt relief of symptoms. The patient spoke of the drainage as being foul smelling and consisting of thick pus. He remained asymptomatic for the next two or three months, but the abscess then reappeared, and was again drained, followed by relief of all discomfort. During the subsequent several months, the mass reappeared on four different occasions, each time being associated with fever and malaise, and on each occasion spontaneous drainage gave prompt relief.

There had been a 36 pound weight loss over the 12 month period prior to admission, and a barium enema, done elsewhere, is said to have shown a

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neoplasm of the colon which, in view of the clinical course, was felt to be inoperable. Eight days prior to admission to the hospital he again developed the onset of fever, and 3 days before admission the mass reappeared in the right groin.

Past history was essentially negative. *Family history* revealed the patient's father to have died of typhoid fever and two cousins had tuberculosis.

System review was negative except for a nonproductive cough of many years duration.

On *examination* the patient was found to be a well developed, but emaciated, white man showing signs of a chronic illness. Weight was 107 lb., temperature 100 , pulse 80, B.P. 100/60. There was no local or generalized lymph node enlargement. The abdomen was soft and flat and no masses or appreciable tenderness could be demonstrated. Approximately 4 cm. below the right inguinal ligament there was a small opening in the skin which measured about 0.4 to 0.5 cm. in diameter. The area surrounding this opening was not swollen as compared to the contralateral side (Fig. 1).



FIG. 1. Artist's conception of the external fistulous opening.

The *clinical impression* on admission was: (1) possible psoas abscess secondary to tuberculous disease of the vertebral bodies or right kidney; (2) appendicitis with external fistula formation; (3) possible tuberculosis of cecum, although nonspecific granuloma, neoplasm, typhoid disease of the ileum and fungus infection were considered; (4) osteomyelitis of the right hip or pelvis.

Laboratory data revealed a Hgb. of 13.5 Gm. WBC 17,800, of which 70% seg. Fasting blood sugar was 232 mg.%; serology tests for syphilis were negative. A chest film revealed the lung fields to be moderately emphysematous but no infiltration or cavitation was noted. An I.V. pyelogram was not remarkable, and X-ray studies of the spine and pelvis were normal. A barium enema showed no defect in the colon.

Preoperative course. The abscess was surgically drained shortly after admission and approximately 500 cc. of pus was evacuated, culture revealing the presence of *Esch. coli.* No acid-fast organisms were noted. In view of the negative pyelogram, colon and osseous studies, it was felt that an external fistula formation secondary to appendicitis was the most likely diagnosis.

Operation. On February 15, 1954, an abdominal exploration was done utilizing a low paramedian incision. The distal tip of the appendix was found overlying the pelvic brim (Fig. 2) and was adhered to the pelvic peritoneum. There were fibrinous adhesions about the distal part of the organ. Upon mobilizing the appendix, the internal fistulous opening in the pelvic peritoneum was visualized and measured approximately 0.5 cm. in diameter. The appendix was removed without difficulty, the stump inverted and the abdominal wound closed in layers without drainage. The postoperative course was uncomplicated; the fistulous tract healed promptly and there has been no recurrence to date. The diabetic state was controlled with diet alone.

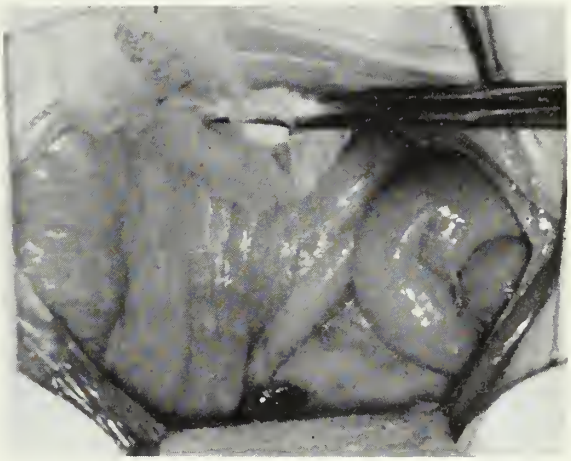


FIG. 2. Photograph illustrating the findings at operation.

Pathologic report. There was evidence of an acute and chronic inflammatory reaction involving all layers of the appendix. Attached to the distal tip of the organ was a tract consisting of granulation tissue.

Comment

The case was interesting from the viewpoint the problem in differential diagnosis.

Pott's disease and a neglected perinephric abscess with rupture and gravitation of the purulent contents along the course of the psoas muscle represent the most frequent causes of an abscess presenting below Poupart's ligament, although these conditions are met with less frequently than in former years. Granulomatous lesions of the terminal ileum and cecum such as tuberculosis, Crohn's disease, actinomycosis and blastomycosis could theoretically produce this clinical picture. The presence of a foreign body should always be considered when dealing with recurrent drainage fistulas or sinus tracts, but there was little to support the diagnosis in this particular case. If one suspects the possibility of an enteric fistula existing, osteomyelitis of the hip or spinal column should be considered, as Dixon and associates[13] have recently reported three such cases with a review of the difficulties encountered in management.

It is interesting to postulate that perhaps in this particular case an inflammatory reaction developed within the appendix, possibly secondary to a fecalith existing proximal to the tip. With increasing tension developing in the appendiceal lumen, the tip of the appendix perforated, and a small abscess developed between the tip of the appendix and the pelvic peritoneum. As the abscess enlarged it penetrated the pelvic peritoneum and gravitated retroperitoneally, over the psoas and iliacus muscles to present below Poupart's ligament in the upper thigh region (Fig. 3).

The repeated episodes of fever, malaise and abdominal discomfort prior to operation may be explained on the basis of recurrent episodes of the acute disease with abscess formation. It appears that when sufficient pressure would build up within the abscess cavity, the external fistula would drain spontaneously with prompt relief of symptoms.

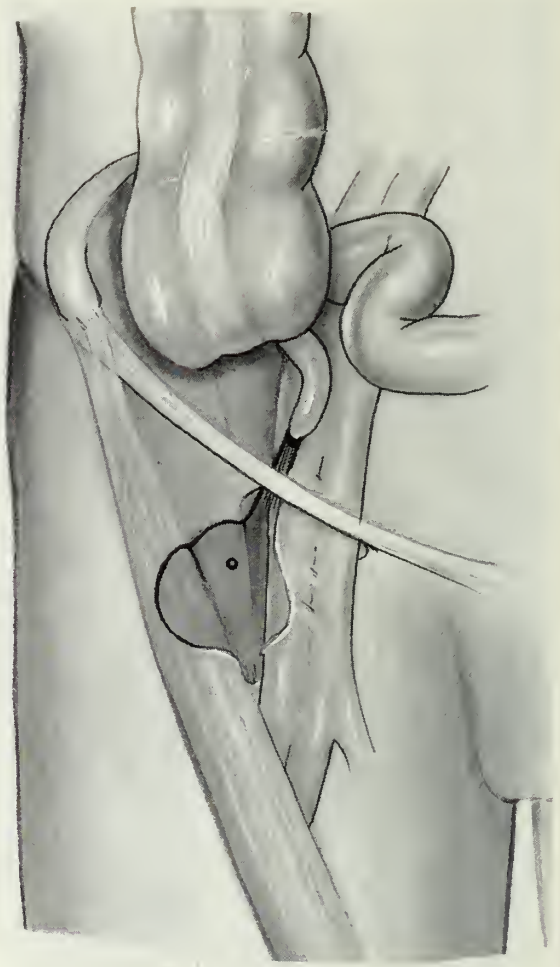


FIG. 3. Artist's conception of the entire fistulous tract.

Summary

An unusual complication resulting from acute appendicitis has been presented.

The differential diagnosis and surgical management have been discussed.

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Rheumatic Fever and Rheumatic Heart Disease-Children as Seen in Clinic Practice. Lindon L. Davis, M.D., Marjorie H. Greene, M.D. Am. J. Dis. Child. 88:427, 1954.

The clinical manifestations of rheumatic fever have undergone a vast change of character. No longer typical is the classic attack with polyarthritis, fever, elevated sedimentation rate, arthralgias and prolonged P-R intervals. The "typical" case as encountered by Drs. Davis and Greene in the Rheumatic Heart Clinic at Meadowbrook Hospital, East Meadow, Long Island, N. Y., has no explosive attack and few or none of the orthodox manifestations. Often the patient sees the physician for some minor complaint and on examination presents abnormal cardiac findings. Frequently a diagnosis of carditis can only be made after repeated examinations and minute questioning of parents for symptoms. The outstanding manifestation of the disease process is carditis, frequently smouldering in nature, and so mild as to render diagnosis difficult and immediate determination of activity of the disease almost impossible. This type of case remains undiagnosed often until obvious and irreparable total cardiac damage has occurred.

Davis and Greene make it clear that children from a selected group attend the rheumatic fever clinic at Meadowbrook Hospital having been screened by the private physician and referred for evaluation of puzzling cardiac findings or questionable rheumatic symptoms.

The authors summarize their diagnostic criteria as follows:

Positive Diagnostic Criteria.

1. Rheumatic heart disease in both parents of the patient justifies, in our experience, a diagnosis of rheumatic heart disease in the presence of cardiac findings of questionable significance.

2. The finding by fluoroscopy of an enlarged left auricle and left ventricle in the absence of clear criteria of congenital heart disease predicates the diagnosis of rheumatic heart disease until proved otherwise.

3. A Grade 3 systolic or louder murmur at the apex, transmitted to the left axilla, will prove to be rheumatic heart disease in most children examined in the clinic.

4. Evanescent prolongation in the A-V conduction in the presence of other "rheumatic like" symptoms is considered evidence of carditis.

5. A prolonged electrical systole (Q-Tc), in our experience, is evidence of the presence of carditis. Failure to find a specific explanation for the carditis leaves rheumatic carditis as the diagnosis of choice.

Presumptive Diagnostic Leads.

1. A positive family history of rheumatic fever and/or rheumatic heart disease in a "sickly" child whose predominant behavior pattern is that of fatigability is presumptive evidence of a mild rheumatic activity in the absence of classic manifestations.

2. Definite changes in heart sounds and murmurs on repeated examinations should point to further exploration for the presence of mild carditis.

3. Chloreiform movements or a history of Sydenham's chorea in the presence of minimal cardiac findings should serve as an incentive for further assessment of the heart for the presence of rheumatic heart disease.

4. "Non-specific" electrocardiographic findings in a child who is otherwise well, particularly a prolonged A-V conduction, notched P-waves, etc., may be the only presumptive signs of rheumatic heart disease.

5. A generally enlarged heart in a child, in the absence of any definite etiologic diagnosis, may be considered as presumptive evidence of rheumatic heart disease.

Helpful Leads in Diagnosis.

1. The child who is "not well" but is not definitely ill may harbor a mild insidious carditis.

2. An older child who shows a marked depletion of vital capacity in the absence of upper respiratory or pulmonary disease may thus show early left ventricular insufficiency in rheumatic carditis.

3. Progressive pallor out of proportion to the level of the hemoglobin is similar to the almost typical pallor of active rheumatic carditis.

4. Our experience in clinic practice does not warrant an adherence to some of the commonly mentioned laboratory criteria, erythrocyte sedimentation rate, antistreptolysin titer, low grade fever, etc. (Abstracted for the Middle Tennessee Heart Association by Dr. Thomas Weaver, Nashville, Tenn.)

STAFF CONFERENCE

Vanderbilt University Hospital*

Toxemia of Pregnancy

DR. FRANK E. WHITACRE: We are presenting for your consideration a patient with toxemia of pregnancy, which is in some respects different from those usually seen. The history, physical findings, and laboratory data will be presented by Dr. Alan Alexander.

DR. ALAN ALEXANDER: This was the third Vanderbilt University Hospital admission of a 24 year old, gravida 3, para 2, abortus 0, Rh negative white married female.

Menstrual History. Menarche at 15 years with regular periods every 30 days lasting for 5 days. Her last menstrual period was March 20, to March 25, 1955. Her expected date of confinement is the 27th of December, 1955. There was no history of menometrorrhagia.

Previous Pregnancies. Her first pregnancy was in 1951 and this was an uncomplicated one of 40 weeks duration characterized by: (1) slowly progressive weight gain of 27½ pounds; (2) no albuminuria edema, or hypertension; (3) an uncomplicated 10 hour labor with low forceps delivery of a live, 6 pound, 12 ounce, female infant; (4) uncomplicated post partum course. Her second pregnancy was in 1953, and this pregnancy was of 39 weeks duration, characterized by: (1) 15 pound weight gain, 8 pounds of which occurred during the last 4 weeks of pregnancy; (2) persistent 1+ albuminuria during the final two weeks of gestation; (3) a 10 mm. rise and a 20 mm. rise in the systolic and diastolic blood pressures respectively during the final two weeks of gestation; (4) the determination of the NPN was 42 mg. per cent, and the determination of the blood uric acid was 9 mg. per cent on the day of delivery; (5) an uncomplicated labor of two and a half hours with low forceps delivery of a live, 6 pound 3 ounce, male infant; (6) the highest blood pressure obtained throughout the pregnancy was 130/98; (7) there was no albuminuria, edema or hypertension found at her 6 weeks post partum check-up.

Present Pregnancy. She was followed in our ante partum clinic from the 20th week of gestation through the entirety of this pregnancy. (Fig. 1.) Upon the initial visit her blood pressure was 115/70, and her weight was 113 pounds, which was three pounds more than her usual weight of 110 pounds. The height of the fundus at this time

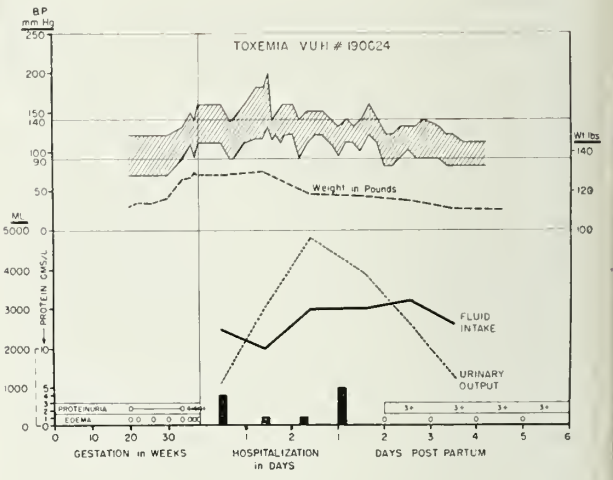


FIG. 1

was 13 cm. Quickening had occurred at 18 weeks gestation. There had been daily nausea and vomiting (two to three times a day) for the first 5 months of gestation. Through the 26th week of gestation there was a weight gain of only 3 pounds. From the 26th to the 31st week, there was a ten pound weight gain. From the 31st to the 36th week, there was a 4 pound weight gain. It was at this time (the 36th week) that albuminuria (4+) and hypertension (148/110) were detected. There was no demonstrable edema present. She was immediately placed on a low salt, high protein, 1500 calorie diet, bed rest, phenobarbital (.03 Gm. four times a day) and ammonium chloride. She was seen in the clinic one week later with a weight loss of 2½ pounds, 4+ albuminuria, blood pressure of 140/90, and free of demonstrable edema. The previously mentioned therapeutical regime was continued, and she was seen one week later (38 weeks gestation) with a 3½ pound weight gain, 4+ albuminuria, blood pressure of 160/110, and still no demonstrable edema. The height of her fundus had increased from 13 cm. at 20 weeks to 23 cm. at 31 weeks gestation. Afterwards, the height of the fundus decreased to 22 cm. at 34 weeks and to 21 cm. at 38 weeks. The fetal heart had remained audible and regular throughout her pregnancy. X-rays were obtained and revealed an estimated fetal age of between 24 to 28 weeks. The patient was hospitalized immediately.

Past History. There was no history of kidney disease, hypertension, or diabetes. A review of systems was entirely noncontributory.

Family History. Noncontributory.

Personal History. She was born and raised in Birmingham, Alabama, and has lived in Nashville for the past six years. Her usual diet consisted of: breakfast, one egg, 2 strips of bacon, one slice of toast, ½ grapefruit and coffee; lunch, one "lunch meat" sandwich with one glass of milk; dinner, one serving of meat. one serving of potatoes, one serving of leafy green vegetables, and one glass of milk.

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Physical Examination. Temperature 98.6 , pulse 78, blood pressure 160/110, respirations 18. This was a thin, nonedematous gravid female in no distress. Ears, nose and throat were not remarkable. The optic fundi were of normal appearance with a three to two vein to artery ratio. The chest was clear to percussion and auscultation. There was no cardiac enlargement and there was an absence of murmurs and arrhythmias. Abdominal examination revealed the uterus to be soft and symmetrically enlarged to the level of the umbilicus. The vertex was presenting with the infant lying in the LOA position. The fetal heart tones were regular at 138 per minute and located in the left lower quadrant. Uterine irritability was definitely present. Sterile vaginal examination revealed the vertex to be presenting at station O with the head engaged. The cervix was soft, very thin with almost complete effacement, and was 3 cm. dilated. There was no demonstrable edema. The neurological examination was noncontributory.

Laboratory Findings. Upon the day of admission the Hgb. was 11.8 Gm., the PCV was 40 per cent, the white count was 13,100. The urinalysis revealed a specific gravity of 1.012, pH of 6.0, 4+ albuminuria, and an absence of glucosuria; microscopic examination of the urine revealed one to two white blood cells per high power field. She had a urinary excretion of 7.2 Gm. of protein during the first 24 hours of hospitalization. Her blood chemistry revealed a NPN of 40 mg. per cent, a fasting blood sugar of 67 mg. per cent, total serum protein of 4.9 Gm. per cent with an albumin globulin ratio of 2.4 to 2.5. The uric acid determination was 8.6 mg. per cent, the sodium was 130 mEql., the chloride was 91.2 mEql and the CO_2 was 21.7 mEql.

DR. C. DOUGLAS STEPHENSON: This patient appeared thin, non-edematous, malnourished, and was in the 30th week of gestation before her weight gain began. Dr. Whitacre's experience has pointed to the increased incidence of toxemia with indigency, with dietary deficiency playing a possible role. It may be significant that in the Vanderbilt Cooperative Study it was noted that of the toxemia group, those who developed eclampsia differed from the pre-eclamptics only in one consistent physical finding,—the absence of obesity. Dr. McGanity had a major part in this study.

DR. WILLIAM J. McGANITY: During the period of the study there were 103 women (5 per cent) who developed acute toxemia,—93 pre-eclamptics and 10 eclamptics. There were no maternal deaths. In 8 of the 72 perinatal deaths, toxemia was an associated condition. Among the patients with toxemia, there was a generally decreased nutrient intake, but consistently so only for niacin. This was associated with a smaller-than-expected urinary excretion of N^1-methylnicotinamide. Prior to the recognition of toxemia this group had an elevated mean total serum protein. Physical examination of the pre-eclamptics indicated an increased incidence of obesity and edema, particularly during the third trimester and post partum. The eclamptic group, however, revealed a complete absence of obesity. Among women with protein intakes of less than 50 Gm. per day, there was no increased incidence of toxemia. These findings do not permit us to support the widely held hypothesis that pre-eclampsia and eclampsia are the result of protein deficiency.

DR. EDWIN L. WILLIAMS: There are two particular aspects of this patient's history which seem worthy of note. Of first importance, is the fact that although a diagnosis of severe pre-eclampsia is the correct one, the degree of nonprotein nitrogen retention is somewhat out of line with the usual laboratory findings in pure pre-eclampsia. To lend support to the possibility of primary underlying kidney disease is the very early occurrence of marked albuminuria which apparently preceded significant fluid retention and hypertension.

Another salient feature which contributes tremendously to success in this patient's treatment is the ease with which induction of labor could be carried out. In view of the fact that she is at term or near term with the vertex presenting and the cervix physiologically prepared for labor, induction by rupture of membranes seems the logical treatment of choice. I believe that she will have a rapid and relatively uneventful labor.

Finally, it is of importance that this patient's urinary and vascular status be completely evaluated at 6 weeks and 3 months post partum, which will, of course, be the final conclusive diagnostic procedure as to whether or not there is a primary renal disease.

DR. D. SCOTT BAYER: The recurrence of toxemia with the last two pregnancies, the slightly elevated NPN with both pregnancies (42 mg. per cent with second preg-

nancy and 40 mg. per cent with present pregnancy) suggest underlying nephritis in this patient. The degree of elevation of blood pressure, rapid weight gain, and 4+ albuminuria would justify diagnosis of superimposed pre-eclampsia. The marked elevation of uric acid (8.6 mg. per cent) would be compatible with the pre-eclampsia diagnosis.

The small size of the baby as indicated by height of fundus (at umbilicus) at 38 weeks gestation with effacement and 3 cm. dilatation of the cervix, could be best explained on the basis of chronic nephritis.

In a patient with this degree of toxemia, history of short labors and effaced partially dilated cervix makes induction of labor much easier if she does not improve markedly with conservative treatment. With these findings we might expect spontaneous labor within the next few days. If this did not occur we would expect easy induction with either pitocin drip, or artificial rupture of membranes.

It will be interesting to follow this patient for future evidence of chronic nephritis.

DR. G. S. McCLELLAN: The proposed management of this case on a day to day evaluation plus the usual bed rest, salt restriction, etc., seems to be logical. The patient's response to treatment has not been too satisfactory, and the question of termination of pregnancy enters strongly as the next major therapeutic procedure. In spite of the X-ray report, I would be inclined to induce labor by rupture of the membranes. The uterus seems to be decreasing in size, and there is a strong possibility that the baby might die in utero.

Although there is an increased incidence of toxemia with indigency, you will recall, Dr. Whitacre, the private patient I had in the hospital last summer whom you saw with me. The patient was an elderly primipara, and had severe pre-eclampsic toxemia which did not respond to treatment along with a similar situation of lack of enlargement of the uterus. This patient's pregnancy was terminated at 34 weeks of gestation by cesarean section, and a living baby obtained which did well following delivery. Therefore, this complication will occur in private practice, and the same problems of management are presented.

DR. WHITACRE: Practically all of the studies on toxemia of pregnancy indicate that it occurs predominantly among primagravida, and that most of these patients do not have a recurrence in a subsequent pregnancy. In fact, it was this observation that led some early writers to believe that the disease conferred some degree of immunity. The sequence of evidence in this case is the reverse; however, inasmuch as the patient had first a normal pregnancy, then a pregnancy complicated by mild toxemia and now in the present pregnancy a more severe toxemia is apparent. Such a course of events immediately suggests the probability of underlying renal damage with a superimposed toxemia. In spite of the many studies as to causation, the etiology of this condition still remains obscure. Numerous studies have contributed, however, to a clearer understanding. It was first assumed that the placenta produced a poison or toxin which resulted in this condition; and hence, is a basis for the name toxemia. It is probable, however, that the placenta only acts as a stimulus to the production of substances which contribute to the development of this syndrome.

If a woman in the course of a normal pregnancy meets death by accident totally unrelated to toxemia, certain physiologic changes are apparent at autopsy. Among them, it is found that the posterior lobe of the pituitary contains many more basophiles than are normally present. These are presumed to be the source of a pressor substance. The thyroid is somewhat enlarged during all pregnancies with some degree of hyperplasia of the cells lining the acini. The adrenal glands are also somewhat hyperplastic. These three glands of internal secretion are known to produce pressor substances, and it is probable that the anatomical hyperplasia indicates physiological increase in the production of pressor substances. In toxemia, constriction of the arterioles is known to be present which accounts for the rise in blood pressure. It is also known that after delivery of the fetus and placenta, that the glands of internal secretion return to their normal state within five or six days. It is probably not just coincidence that post partum eclampsia is almost unknown after the sixth day. The

natural question then, is why all pregnant women do not develop toxemia of pregnancy, and it is reasonable to assume that most of them are protected by the elimination or neutralization of these pressor substances, but some are not.

Studies of this disease in various parts of the world would indicate that climate, geographical location, race and color do not seem to be important, but inasmuch as the great majority are in the indigent or relatively low economic group, it is reasonable to assume that nutrition is concerned with the patient's ability to protect herself. The protective proteins, minerals, and especially vitamins probably aid in the ability of the liver to neutralize these otherwise physiologic substances. This reasoning is far from being proved, but some supporting evidence is accumulating.

As to the treatment which is the primary object of this discussion, I am in agreement with the previous discussants in that induction of labor is probably indicated. Severe toxemia of pregnancy can only be treated with finality by means of emptying the uterus. All forms of medical management have as their primary object to get the patient in the best possible condition in order to make emptying of the uterus a reasonably safe procedure, and we know that more than 80 per cent of these patients can be delivered from below. Cesarean section under the present conditions is probably unnecessary, and if this patient does not spontaneously go into labor, we will accept the advice given at this conference and carry out an induction of labor.

ADDENDUM: This patient settled her difficulties for us, for shortly after the conclusion of this conference, she went into spontaneous labor and delivered successfully. At her later follow-up visits in the outpatient clinic, an effort will be made to determine whether or not primary renal disease is present.

The Significance of Basal Cell Hyperactivity in Cervical Biopsies. Calvin, Gerald A., Jones, Howard W., and TeLinde, Richard W. Am. J. Obst. & Gynec. 70:808, 1955.

The term basal cell hyperactivity will probably reach the significance and popularity that preinvasive carcinoma of the cervix now has. Basal cell hyperactivity of the cervix is an increased hyperactivity and anaplasia of the cervical epithelium, but with insufficient atypicalness to be classified as carcinomatous. The significance of this microscopic finding and its possible relationship to carcinoma-in-situ is questionable. This Johns Hopkins group diagnosed this condition in 191 patients over a four year period. The cases were classified as to Stages I, II, and III, depending upon the degree of proliferation and anaplasia. The 191 cases were followed closely with biopsies until either the condition regressed to normal or advanced to carcinoma-in-situ. Of the 191 cases, 93 were Stage I, 63 were Stage II, and 35 were Stage III. Of the Stage I, 50 reverted to normal, 28 persisted with the same degree of hyperactivity, while 15 showed an apparent progress to a greater degree of hyperactivity but only 2 or 2.1 per cent showed carcinoma-in-situ. Of the Stage II, further study revealed 28 regressed, 20 experienced no change, and 15 progressed to a greater degree of abnormality, of which 8 or 11 per cent showed carcinoma-in-situ. Of the Stage III, 6 regressed, 6 showed no change, and in 23 or 65 per cent, subsequent biopsies revealed carcinoma-in-situ. Since basal cell hyperactivity and carcinoma-in-situ can exist together in the same cervix at the same time, it is possible that in some of these cases the conditions were existing simultaneously and do not represent a progression to carcinoma-in-situ. However, there were 11 cases that were followed with multiple biopsies for over 16 months in which carcinoma-in-situ was ulitmately diagnosed. This would seem to imply that basal cell hyperactivity may develop into carcinoma-in-situ. From this study it was concluded that basal cell hyperactivity should have further investigation in order to rule out carcinoma-in-situ and followed until the condition regresses.

CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital, Memphis, Tenn.

Acute Ulcerative Endocarditis*

A seventy-one-year old white female, gravida III, para III, was admitted to the hospital on April 23, 1955. She was in a somewhat stuporous condition, complaining of dyspnea, nausea, vomiting and tenderness in the right lower quadrant. These symptoms had gradually increased in severity during the previous four weeks. They had begun about two weeks following the removal of the right kidney for nephrolithiasis. She was seen by her family physician on April 8. He obtained a history of slight nausea for four days. This was associated with several episodes of rigors and severe shaking chills. Her temperature was 101.4 , pulse 104, B.P. 135/65. Examination of the chest was negative. The heart was not enlarged, the rhythm was regular excepting an occasional premature systole. A to and fro murmur was described over the aortic region. This was accentuated in the lower left parasternal area. She had tenderness without rigidity in the right lower quadrant of the abdomen. Examination of the pelvis disclosed extreme tenderness in the right adnexal region. The cervix was displaced to the left. No mass was felt. A voided specimen of urine showed a two plus albumin, no sugar, 6 WBC/hpf A sedimentation rate of 4-22-41-49 mm. at 15 minute intervals was obtained. Tetracyn SF capsules every 4 hours and Empirin No. 2 were prescribed. The temperature remained slightly elevated and the pulse was usually about 100. Her nausea persisted, chills and rigors were markedly increased. Point tenderness persisted in the right lower quadrant. On April 16, one week before admission, many extrasystoles were heard and there was a scraping systolic murmur in the left lower parasternal area. Superficial cellulitis of the right lower leg was diagnosed. There was no pelvic tenderness. Weakness and easy fatigability increased from this time onward. A two plus edema of the lower legs appeared and this was associated with a few rales in the right lower lung field. Hospitalization was refused, but she became somewhat stuporous and her nausea and vomiting became more persistent, and became associated with increased tenderness in the right lower quadrant. She finally agreed to be admitted into the hospital.

As mentioned above, a nephrectomy had been performed at another hospital in Memphis. The history indicated that the operation had been preceded by a sudden onset of pain in the right flank. This had been followed by nausea and vomiting. At the time of that admission the heart was considered to be of normal size. There were infrequent extrasystoles and a grade II harsh systolic murmur throughout the precordium. The stone was in a difficult position for surgical removal. Since the left kidney was normal in function and structure a right nephrectomy was done. The kidney weighed 370 gm. The cortex was pinkish-gray, firm and had a "few necrotic areas." The calyces were distended and filled with purulent pinkish-brown material. The microscopic diagnosis was acute pyelonephritis associated with nephrolithiasis. There was a history of renal colic and the passing of calculi in 1943 and 1929.

In June, 1950, the patient had been treated for a comminuted fracture through the surgical neck of the right humerus. A radiologist had noted a suspicious fracture through the 9th rib in the posterior axillary line. The humerus healed with good callus formation.

In December, 1952, the patient had a mid-shaft fracture of the clavicle. X-rays showed: "some features about the fracture that suggest pathologic fracture. No abnormalities noted in the adjacent bony structure." The patient is said to have had meningitis at the age of 15.

The patient had occasional occipital headaches. She was also subject to coughing excessively after every cold. She was said to have had high blood pressure twelve years ago but this had not persisted and there was no hypertension upon admission. She was told at one time that she had an enlarged heart. She had slight pain after voiding and was subject to nocturia.

Physical examination, recorded on the third day after admission, revealed a temperature of 98 , pulse 80, respiration 20, B.P. 110/50. The head and neck were normal. Scattered moist rales were heard in both sides of the chest. The point of maximal impulse of the heart was lateral to the left midcostal line. Heart sounds were diminished and difficult to evaluate. The cardiac rhythm was regular. There was a somewhat tender healing right nephrectomy scar. No abdominal masses or organs were palpated. There was 1 to 2 plus pitting edema of the extremities. The skin was pale and sweating moderately. The cranial nerves were intact; reflexes normal and no motor or sensory loss was detected.

On admission the urine was amber, cloudy, acid and had a specific gravity of 1.029. It was negative for albumin and contained a rare WBC. A test for sugar was negative. The PCV was 33 per cent, WBC 28,150 with 81 seg., 10 bands, 8 lymph. and 1 monocyte. The NPN was 115 mg. per cent on the first day. The PCV was recorded again at 33 per cent on the second day at which time the WBC was 29,200 with 77 seg., 16 bands, 6 lymph. and 1 monocyte. The red blood cells were described as hypochromic and the platelets appeared to be decreased in number. There was slight toxic granulation in some of the neutrophils. A second urinalysis revealed a yellow color, acid reaction, specific gravity 1.018 with a heavy trace of albumin and a slight trace of sugar. There

*From the Department of Pathology, Methodist Hospital, Memphis, Tenn.

were occasional white blood cells in the urine. A second NPN was recorded as 100.5 mg. per cent. CO_2 combining power was 16.7 mEq./l. The chlorides were 99.4 mEq./l.

A plain film of the abdomen showed an over-all haziness of the abdomen. The kidneys could not be visualized.

The patient was placed on a regular diet and given instructions to force fluids. The initial blood pressure was 92/40. There was marked oliguria. On the day following admission a surgical consultant noted that the examination of the abdomen was difficult because of the obesity, but there was some splinting of the right side of the abdomen. Pelvic examination revealed a tender mass in the right adnexal region. Five million units of penicillin in glucose and saline was recommended, and adrenal cortex, 5 cc. every 4 hours. The urinary output continued to be scant and less than 150 cc. per 24 hour period was recorded. On the second day the patient seemed to be improved. The rectal temperature had dropped to 98° but a further drop to 96.2° occurred and the pulse dropped rather precipitously to a rate of 70. Five hundred cc. of blood was given. The following morning the blood pressure was 84/40, pulse 96. The pulse was of fair quality but generalized edema was present. There were a few rales heard in the right lung, moderate rales in the left side. The patient was somewhat overhydrated but the urinary output remained insignificant. The adbomen became more distended and was quiet. On the morning of the fourth hospital day the patient went into shock, suffered respiratory failure and died at 10:29 a.m.

DR. WILLIAM W. TRIBBY: Dr. Jean Hawkes has consented to discuss the case. Dr. Hawkes.

DR. JEAN HAWKES: Essentially, this is the case of an elderly female who died in renal failure associated with a fulminating infection about six weeks post-operatively. The problems are the type of infection which she had, the reason for renal failure and the importance of a variety of associated conditions. There are a few things in the record that I would like to discuss, but first I want to point out that the onset was during her convalescent period, about two weeks after her nephrectomy. When she had her chills and fever, certainly an abscess and/or septicemia are suggested, without any very localizing signs. Then, we come to the mention of a to and fro murmur discribed over the aortic region. As we go on through the record, almost everyone who saw her describes a murmur but no two people describe it the same way. This may be the result of different people making a superficial examination of someone who is obviously not a cardiac and of not having read the note of the previous examiner. There seems to be little correlation. Later on, she has a harsh grade II systolic murmur, at the time of her nephrectomy; in another place she has a scraping systolic murmur in the left lower parasternal area and at the time of her admission she had heart sounds which were "diminished and difficult to evaluate." I am not going to attempt to evaluate them either, not having heard any of them. The mass and tenderness in the right lower quadrant are about the only things which are consistently described throughout the history. She started out with tenderness and no rigidity in the right lower quadrant at the time she was first seen, Prior to that she had some pain there. Later, she had extreme tenderness in the pelvis in the right adnexal region, which apparently did not respond to a course of "magic" drugs and the tenderness persisted. Later on, the pelvic tenderness is said to have disappeared but finally it increased and at that time she was admitted to the hospital. The surgical consultant who saw her the day after admission describes splinting in the right side of the abdomen and a tenderness in the right adnexal region. So I'm inclined to believe she had something in the lower right quadrant. On April 16, two plus edema of the legs appeared; this was associated with a few rales in the right lower lung field. The suggestion of beginning decompensation is not borne out by the pulse rates of 80 and 70. She had not had sufficient albuminuria to render her hypoproteinemic but the occurrence of thrombophlebitis is possible. The fact that she had a cellulitis of her legs would be compatible with this. Possibly the rales which were heard then and practically constantly throughout the remainder of her course may have been due to small pulmonary emboli. Three times she had had urinary renal calculi in the past, and on two occasions she had fractures. At both times the radiologists had their suspicions aroused by the possibility of some bony abnormality, but they never committed themselves. The question of hyperparathyroidism comes to mind; however, a course lasting twenty-five years and still undiagnosed

is a little unlikely and since there were no calcium determinations done on the blood or urine in the hospital, I think probably there was some good reason that this was not followed up. The second page bewilders me considerably, because the physical examination which is recorded on the third day after admission gives her a normal blood pressure; the time of admission gave it as 92/40; then on the third day it is recorded as 84/40, but that is the same day she had a physical examination, when the blood pressure was 110/50. Certainly, on physical examination, nothing new was found. The laboratory revealed that she was anemic, had leukocytosis and was azotemic. When she was hydrated, as I presume she was, the specific gravity of her urine was decreased some and had a slight trace of sugar and the NPN dropped a little, but she never did well during the hospital stay. I don't care about seeing the X-ray films because I don't think they will tell me anything, unless you want to divulge something that you haven't told.

DR. EDWARD H. MABRY: These radiographs are dated January 13, 1955, and it seems that we have two urographic studies, one by the excretory method, one retrograde. You are looking at the back of the patient. In the right kidney there is evidence of a large mass in the region of the kidney, with the shadow of a stone over the region of the lower pole. There is also a stone seemingly down in the lower ureter, near the junction with the bladder. The left kidney shows prompt visualization of the kidney pelvis and ureter at ten minutes and again at sixty after the injection of the dye. So adequate excretion and handling of the contrast medium by the left kidney is in evidence on these films. There is no obstruction to the ureters noted.

DR. HAWKES: In the hospital she never put out a satisfactory amount of urine, in spite of attempts to stimulate this with various methods. She finally went into shock and died. The three main possibilities which I want to discuss are: Hyperparathyroidism, chiefly because she has a history of renal calculi on three occasions and two fractures which were not apparently too satisfactorily accounted for. The removed kidney was diagnosed as acute pyelonephritis and nephrolithiasis. The length of the illness, if you can call it that, of twenty-five years, I think, is against hyperparathyroidism. Also this would not explain her leukocytosis nor the mass in the right lower quadrant. Also, since no calcium, phosphorus or phosphatase studies were done, I think that wasn't seriously considered, although I am sure it was in their minds. The second possibility would be subacute bacterial endocarditis, chiefly to rationalize the variety of murmurs which were heard. Certainly septicemia could give her this febrile course with the chills and fever, edema and leukocytosis, weakness and fatigability. However, this too, would not explain the mass and discomfort in the right lower quadrant. The third possibility would be a pelvic abscess and probably septicemia, at least intermittently. This would explain fever, pain, tenderness and the mass. It could be either postoperative, since it started about two weeks after her operation, or my second, and statistically better, guess is that it represents a ruptured appendix. The history is not typical, but elderly patients, as we all know, don't always have a particularly typical course for appendicitis. She did have nausea, vomiting and right lower quadrant pain, followed by a febrile course. I believe that she had an associated thrombophlebitis which is responsible for the edema and probably for some small pulmonary emboli and that her death was due to a larger pulmonary embolus. I don't believe she had congestive failure at any time and I believe her renal failure was probably due partly to her toxic condition and possibly partly to the fact that she had poor renal reserve.

DR. TRIBBY: Are there any other suggestions about the diagnoses?

DR. ALFRED MASON: We don't know anything about the condition of the ureter at the time of the operation. It not infrequently happens that, with renal calculi, there may be one that will drop down in the ureter at the time of operation or shortly before, obstruct the lower end of the ureter and then the upper end is tied. We know that this was acute purulent pyelonephritis, particularly pyelitis, from the pathological report. The accumulation of the pus in the tied-off ureter could have produced the con-

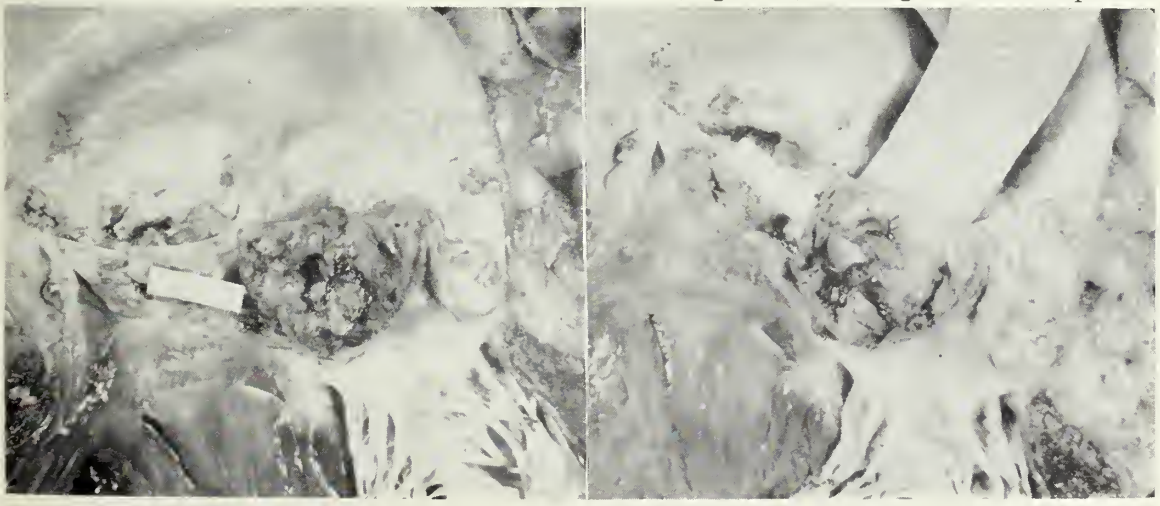
dition that she had and possibly later on it ruptured, the suture might have blown off the top of it and spilled pus into the right retroperitoneal space, producing her symptoms, particularly since she had no appreciable amount of rigidity in the right lower quadrant at the time of onset. She had pain but not much rigidity until later. That would have to be considered as one of the possibilities. Another thing, simply a warning, is it is not a good idea to take out a kidney if you can avoid it, regardless of how good the other kidney might look. You can't tell when it may go bad. I believe that probably this patient had a streptococcal septicemia with an acute nephritis and lost the function of the remaining kidney.

DR. TRIBBY: Thank you, Dr. Mason. Are there any other comments? If not, Dr. Butt will discuss the case for the Department of Pathology.

DR. BUTT: The diagnoses at autopsy were as follows:

Acute ulcerative endocarditis of aortic valve
Perforation of leaflet
Aortic regurgitation
Focal calcification of aortic valve, probably rheumatic
Hypertrophy of heart (550 gm.)
Subendocardial hemorrhage of mitral valve
Interstitial fibrosis of lungs
Organizing infarct of spleen
Hemoglobinuric nephrosis
Calcinosis of kidney
Acute esophagitis
Chronic passive congestion of liver
Healed infarct of left frontal lobe of brain
Nodular hyperplasia of adrenal
Cavum septum pellucidum

Dr. Hawkes has closely approached the clinical thinking in this case. At the time of autopsy the impression was ruptured appendix or perirenal abscess. We examined this obese woman's abdomen very carefully, however, and except for slight scarring in the region of the incision for the right nephrectomy, there was nothing to account for the mass which had been described. The uterus was small, the ovaries atrophic and the appendix was not inflamed. There was ulcerative endocarditis which we have termed "acute" because it was probably of less than six weeks duration and fits the usual textbook description. There was rather marked calcification of the underlying valve but we believed this to be of rheumatic etiology and found no evidence of hyperparathyroidism. Both lungs had a marked interstitial fibrotic change which we believe was of significance in production of the persistent dyspnea. Incidental findings were a rather large organizing infarct of the spleen, probably resulting from an embolus from the large vegetation on the aortic valve and hemoglobinuric (lower nephron) nephrosis. There was also marked metastatic calcification in the renal parenchyma which was thought to be the result of an extreme osteoporosis. The first slide shows the symmetrical enlargement of the cardiac ventricles. On the left aortic cusp is a large vegetation covered with a shaggy gray necrotic exudate. The pearly white areas around the vegetation represent focal calcification. The next slide shows a close-up of this. (Fig. 1-A.) A finger has been placed



A FIGURE 1 B

on the aortic side of the cusp to demonstrate the large jagged defect in the central portion of the leaflet. (Fig. 1-B.) This probably accounts for her changing murmurs, in part. The next slide shows the mitral valve with what we thought at first might represent another focus of ulceration. In the sections, however, all we saw was considerable hyperemia and inflammation due to the process on the aortic valve. This photomicrograph shows the loosely reticular structure of the vegetation. Many inflammatory cells are present but I cannot tell you whether organisms are present. Some observers believed they could recognize small clumps of organisms in the permanent sections. We were unable to culture any. The next slide shows the large numbers of macrophages present. Here is a picture of the hemoglobinuric nephrosis showing a large cast in the tubule of the kidney. Elsewhere there is considerable cloudy swelling of the tubules. Here is an area of calcification in the kidney. (Fig. 2.) This slide shows the acute esophagitis with ulceration which was present in an area, measuring 4.0 x 5.0 cm., above the cardia. The next slide demonstrates a tremendous fibrous proliferation throughout the lungs. (Fig. 3.) This is taken in the midst of the pulmonary parenchyma and we should see the usual alveolar pattern rather than these thick fibrous strands. These have resulted from some type of reactive hyperplasia, and if you believe in such a thing as rheumatic pneumonitis, perhaps this may be a late result.

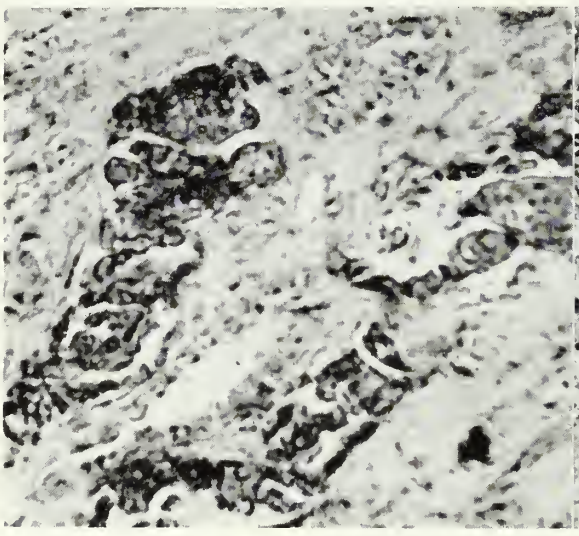


FIGURE 2

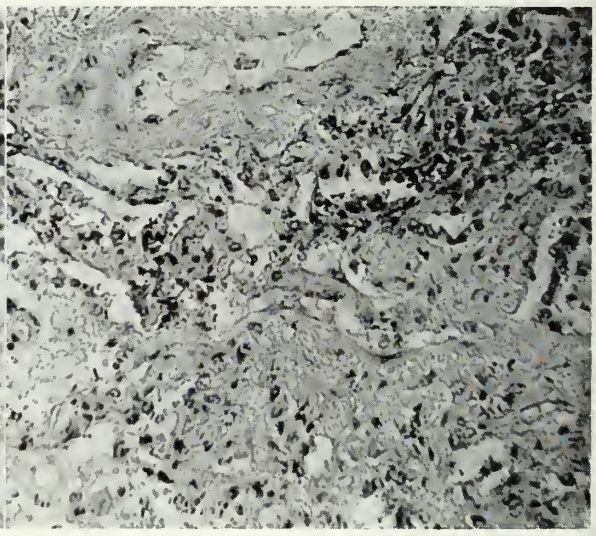


FIGURE 3

President's Letter

YEAR END MISCELLANY

(The Guest Editor of the President's Page for January is the Chairman of the Board of Trustees and Treasurer, Dr. James C. Gardner of Nashville)

As Chairman of the Board of Trustees and Treasurer, I welcome the opportunity to present to the membership several matters that should be of interest.

Too few Doctors realize that the Tennessee State Medical Association has made tremendous gains in all phases of its work since the close of World War II. At that time, our membership was approximately 1,500 physicians and the Association was classed as a small state medical society. That is not the case today. At the close of December, 1955, our Association consisted of 2,475 members. More doctors are practicing medicine, more hospital beds are available, and more of Tennessee's population require medical care than ever before in our history. With these developments, a greater demand has been made upon the Tennessee State Medical Association, necessitating the expansion of its program of work and services. Activities of our Committees and the general expansion of the Association has called for added expense in carrying out our program of work.

Care must be taken at all times to fit the expenses of the Association into the income available. That is not always easy to accomplish.

Within the past two years, added expenditures have been requested of the Association. If all requests were approved, money would not have been available for all activities.

Careful consideration has been given to such requests by your Treasurer and Board of Trustees. Much thought was given as to how the Association's income could be increased without additional dues. Progress has been made in the past two years as a result of extra efforts of your Executive Secretary to bring additional income into the Association. This was done through increasing the amount of advertising in the JOURNAL, sale of additional exhibit space at our Annual Meeting, and consolidation of certain activities in order to cut down expenses. Through this method, the Association has obtained the additional income necessary to carry out the added activities without affecting dues. The advertising income has been increased 36% and revenue from exhibits increased 25%.

The past year has been marked by the offering of new services and the expansion of others. It is the belief of your Treasurer and Board of Trustees that the individual member of the Association presently is receiving or is eligible to receive increased dividends from his investment of dues as compared with several years ago.

Increased services are currently being rendered through the central office.

The 1955 budget called for $58,655.00 to operate the organized activities and program of the Association. Major items of expense were printing and distribution of the JOURNAL, staff salaries, office rent and operation, Committee expense, A.M.A. Delegates expense, annual meeting, attorney fees and postgraduate education. In addition, $18,008.00 was allocated for Public Service activities. This amount included salaries, travel expense, and the other varied activities of the Public Service Committee.

The year saw the culmination of plans to erect a headquarters office building for the Association. Long term financing was secured at a minimum rate of interest and the year's end finds the new headquarters building practically ready for occupancy. The headquarters building will have cost the Association approximately $36,000.00 which will be amortized over a twenty-year period.

In closing, I wish to express my appreciation of your support and to inform you that your funds are allocated only after considerable study.

JAMES C. GARDNER, M.D.

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JANUARY, 1956

EDITORIAL

TETANUS IMMUNIZATION

The increased international tensions during the years since the end of the Korean war have emphasized the role of civil defense in our national and medical thinking. The experiences of the civilian population in England and Wales during the heavy bombing in World War II showed that absolute protection from tetanus is possible by proper immunization of all bombing casualties.[1]

But in addition to the need for protection against tetanus in war time the disease is still a hazard for civilians in peace time. Tetanus has been said to be a dying disease in the United States. probably because of the large urban developments where horses and other farm animals have become a rarity. It may be a dying disease but it is not dead as may be attested by any practicing physician.

Tetanus carries a high mortality.[2] The National Office of Vital Statistics reports a mortality for 1950 of 336 cases. The relative importance of tetanus as a cause of death in the United States is thrown into relief when it is noted that for the same year there were only 410 deaths from diphtheria, 96 deaths from typhoid fever and 1 death from smallpox. The over-all mortality of tetanus is 45 to 50 per cent.

Tetanus develops when its spores are implanted in dead tissue which provides the necessary anaerobic conditions. Some tissue necrosis is essential but calcium and iron salts which are always present in dirt produce sufficient tissue necrosis to favor rapid multiplication of tetanus organisms. Puncture and deep lacerated wounds produced by dirty objects, therefore, offer ideal conditions for the development of tetanus.

The incubation period of tetanus varies. About one-third of the cases develop during the first week, about one-half within the second week, and the remainder have an incubation period longer than two weeks following the injury. It is highly significant that in practically all of the carefully studied series of cases the shorter the incubation period the higher the mortality rate.

Tetanus is a preventable or an almost preventable disease. The essentials of prophylaxis include adequate wound debridement, open wound drainage in doubtful instances and active or passive immunization.

Although passive immunization with tetanus antitoxin is a well established method of treatment for those having wounds likely to be contaminated with tetanus organisms and not previously immunized, it is not our purpose to discuss this at the present time.

The effectiveness of active immunization with tetanus toxoid was irrefutably established during World War II when the disease was almost prevented in the British and American Armed Forces. There were only 30 cases of tetanus in Allied personnel who had received the prescribed course of immunizing injections. The basic series in the Armed Forces consists of 3 intramuscu-

[1]Sachs, A., Royal Society of Medicine Proceedings. Vol. 45:641 1952.

[2]Hampton, Oscar P., Jr., American Journal of Surgery. Vol. 87:474 1954.

larly injections although the third is actually a booster dose given routinely one year after the immunization is initiated. The second dose is administered 1 to 2 months after the first. In the event of injury during the 10 or 11 month period after the receipt of the second dose of toxoid the third dose is given immediately. Routine booster injections every 2 to 4 years may not be necessary but they are most likely to maintain a protective level of antitoxin and therefore provide a safeguard against unsuspected inoculations with tetanus spores.

Because it is felt that a booster dose of toxoid may not give a sufficiently rapid rise in antitoxin to protect the individual during the first week, some have advocated the inoculation of tetanus antitoxin at the time the booster is given since the antitoxin will produce its effect immediately, and this effect will last for one week or until the tetanus toxoid booster takes over. This approach to treatment was advocated by the British Army during the last war, but certainly the results obtained in the American Army where toxoid alone was employed were excellent and lead us to advocate the routine use of tetanus toxoid without tetanus antitoxin unless circumstances indicate that the development of tetanus is highly probable.

It would seem highly desirable for each physician in this State to immunize every patient with tetanus toxoid as a prophylactic measure. It is believed that if this principle is followed, needless deaths due to tetanus from peace time accidents could probably be eliminated, and in case of hostilities the civilian population would be better able to withstand war time injuries.

A. B. S.

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THE CORONER SYSTEM IS OUTMODED

In medieval England the sheriff was the chief executive officer of a shire and had the duty of enforcing the laws and keeping the peace. The kings probably mistrusted the sheriffs, for it seemed necessary to set up a new office to keep watch on the sheriff. It appears that Henry I (1100-31) first appointed such an officer. However, the office of the coroner was set up by act in 1194. This was royalty's check on the sheriff. The coroner probably was a potent officer along with the sheriff in maintaining the crown's prerogatives, for the Magna Carta (1215) prohibited both the sheriff and coroner from holding pleas of the crown. One of the coroner's functions was the ascertaining of certain facts about dead persons, for the king had a monetary interest at stake. It seems that under certain circumstances the monies and goods of the dead could be forfeited to the crown or church.

This then was the background for the coroner's interest in deaths and the cause of deaths. Apparently some of the other duties clung to the coroner, for the Coroner's Act of 1887, in England, took away some of the duties interdicted by the Magna Carta.

What has this to do with anything of interest to the medical profession? For years the coroner system has come into question here and there as having outlived its function. The need for applying scientific knowledge to the cause of death has long been apparent. This had led to the development of the Medical Examiner System now established in certain parts of the country. It comes as a surprise that Massachusetts as far back as 1877 separated the medical duties from the legal duties of the coroner, placing the former in the hands of a properly qualified person.

Let us see what the coroner system consists of. In Davidson County, as an example, the coroner is elected by the County Court. He must post a bond of $2,500 for his two-year term of office. If two or more reliable persons make affidavit that there is reason to believe that a person died by violence the coroner may hold an inquest with the aid of a jury. For each inquisition he receives the fee of $5.00. The coroner may call a professional person to examine the body and give a professional opinion as to the cause of death for which a fee of $25.00 may be paid, and the cost of chemical analysis shall be included in this amount. A recent news story in the Memphis *Press Scimitar* pointed out that Shelby County is better off than the rest of the Tennessee Counties in this respect, since by a private act of the 1951 Legislature a physician became the coroner for the first time. He receives a specified annual salary. Through agreement with the University of Tennessee

its Department of Pathology became available for medico-legal autopsy service.

The coroner system (except for Shelby County) thus provides for a system of this structure. First, the office is headed by a lay politician. Secondly, the staff, professional and nonprofessional, are dependent upon the will of the coroner. It would seem that this would make for an office of political consideration rather than an atmosphere of scientific and efficient performance.

As was pointed out by the *Press Scimitar* the requirement of affidavits by two persons questioning the cause of death prevents the exposure of murder, suicide, and accidental deaths. It states no inquest has been held in Shelby County since 1938. Less than 1 per cent of deaths in the County come to autopsy, and with 447 medically unexplained deaths annually this provokes thought relative to the outmoded coroner system and investigation of deaths by inquest.

Under the Medical Examiner System the medical duties are separated from the legal duties. The medical duties are placed in the hands of a qualified person, one "learned in the science of medicine" as defined in the Massachusetts law. Thus is provided an arm of government which can marshal scientific medical, pathologic and chemical evidence that is direct and trustworthy. Under a modern Medical Examiner System the detective and legal investigations formerly in the hands of the coroner are assigned to the police and district attorney. These will be more successful in their duties if provided with information by a qualified medical examiner. All too frequently a district attorney has made a poor showing in a homicide case because of the poor quality of records and examination provided under the coroner system. The medical examiner also can play an important role in civil court actions and Workmen's Compensation cases.

After due consideration and study of the matter the Nashville Academy of Medicine made the following recommendations several years ago.

1. That the office of coroner be abolished. It is an anachronistic institution which has conclusively demonstrated its incapacity to perform the functions customarily required of it.

2. That the medical duties of the coroner's office be vested in the office of medical examiner.

3. That the office of medical examiner be headed by a scientifically trained and competent pathologist, selected and retained under civil service, and compensated by a salary which will attract men of genuine scientific training and ability.

4. That the office of medical examiner be provided with the services of a staff competent in toxicology, bacteriology and the other sciences necessary in the scientific investigation of causes of deaths, and with adequate modern scientific equipment. Wherever possible these specialists should be members of the medical examiner's staff selected and retained under civil service at adequate compensation.

5. That in addition to the medical duties of the coroner's office there should be vested in the medical examiner's office in this county the duty of furnishing to police prosecutor and courts expert medical assistance at every stage in the investigation, prosecution and disposition of criminal cases of every description.

6. That the nonmedical duties of the coroner's office be vested in the appropriate prosecuting and judicial officers.

Your Editor believes that what has proven to be good for some of the cities on the Eastern seaboard should be good for our cities of our State. According to the *Press Scimitar*, a bill drawn up for the 1951 Legislature, but which never reached the General Assembly, would have authorized the coroner to investigate and order autopsies "upon the death of any person from violence or suddenly when in apparent good health, or when unattended by a physician, or in prison, jail or penal farm, or in any suspicious, unusual or unnatural manner."

The barons and townspeople found fault with King John's coroners in 1215 as shown in the Magna Carta. Would it be amiss for the medical profession of Tennessee, in 1956, to urge upon politicians and lawmakers the discarding of a hoary tradition and replacing it with a system that can use modern science for the protection of the public welfare? R. H. K.

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FEDERAL LEGISLATION

The Committee on Legislation of the American Medical Association held a regional legislative conference in Atlanta on November 6, for representatives of 9 southeastern states. The need for a united effort on the part of the medical profession, if medicine is to continue without federal assistance and ultimate complete federal control, was made clear.

From the Executive Secretary

ORGANIZATIONAL NEWS

What Is H.R. 7225?

● H.R. 7225 proposes sweeping changes in the Social Security Act. Its most controversial provision, and the one with the most serious implications for the medical profession is is the section that would make permanently and totally disabled persons eligible at the age of 50 to receive Social Security benefits not now available to others until 65.

In addition to the disability benefits, H.R. 7225 would lower the retirement age for women under Social Security from 65 to 62, extend monthly payments for permanently and totally disabled children beyond the age of 18, and expand compulsory Social Security coverage to all self-employed professional groups except physicians. H.R. 7225 would increase payroll taxes in 1956.

How Would HR 7225 Affect You?

● Physicians would have primary responsibility for determining who is disabled. They would have to examine and certify candidates for disability benefits. Often on their word alone would the final decision be made as to whether an applicant should receive CASH PAYMENTS for his disability. Because of vagueness within the bill as to what constitutes disability, it is inevitable that the decision would often be subjective. In some instances, political pressures would be equally inevitable.

What Are the Prospects Of HR 7225?

● The House of Representatives passed H.R. 7225 by a vote of 372-31, without open committee hearings and under a suspension of the rules that limited debate to 40 minutes. It is now in the Senate, and will be considered by the Senate Finance Committee. It is expected there will be extensive public hearings on the bill.

Whither Social Security?

● With passage of H.R. 7225, the acknowledged increases to the year 1975 would bring the total employee-employer contribution to 9%. For the self-employed, it would be 6.75%.

What Is the A.M.A. Viewpoint on HR 7225?

● "The A.M.A. viewpoint is simply this: 1. The Social Security issue should be taken out of politics. 2. There should be an objective study of the system itself and the effects of further expansion. The A.M.A. will do its utmost to cooperate in such a study and to help supply available facts on disability, rehabilitation and medical care. 3. As it now stands this bill could have far-reaching effects upon the entire practice of medicine in our country. 4. There is no need for immediate passage of the bill with regard to 'permanent' disability benefits. 5. Cash handouts would be detrimental to our national program of rehabilitation."

Report on Actions of A.M.A. House of Delegates November 29-December 2, 1955

● Social Security, the report of the Committee on Medical Practices, Grievance Committees and Revisions of the Code of Medical Ethics were among the major subjects of discussion and action by the House of Delegates of A.M.A. on November 29-December 2.

The Policy Side

● The 195-member House of Delegates worked three days on 700 pages of reports and 37 resolutions in a business-like manner, recording only one split vote in the unusually harmonious session. Major actions, summarized, are these:

Social Security

● Combining action on four resolutions and three reports, delegates voiced "...determination to resist any encroachment upon the American system of medical practice," calling for deferment of action by Congress on H.R. 7225, cash disability payment under Social Security, and "...objective, impartial study free from politics."

Medical Practices

● Adopted the final report on the year-long study of guides for grievance procedures. Ordered that henceforth any change in the Principles of Medical Ethics must lie on the table until the session following the one at which presented.... Established a permanent Committee on Medical Practice to study relative values of diagnostic, medical, and surgical services.

Other Actions

● Opposed 'free' Salk vaccine....Asked for consideration of a dues increase....Set up a new study on auto accidents.... Commended the Sears Foundation for medical practice unit sponsorship....Received a professional liability insurance study which said the situation is bad but had little to offer in the way of help....Turned thumbs down on a proposal to divide pathology into so-called 'technical' and 'professional' services....Heard a lengthy report on the voluntary health insurance study....Applauded President Hess when he said that "...complacency is our greatest enemy."...Picked up $136,000 in gifts to AMEF....Urged support of the three-year mental health study.

Income Tax Aid

● Assistance in filing 1955 income tax returns may be found in the booklet "Federal Income Tax Liability of Physicians" available from the A.M.A.'s Law Department, 535 N. Dearborn Street, Chicago 10.

TSMA Membership All Time High

● TSMA hung up a new membership record at the close of the year hitting an all-time high of 2,475 members in good standing at the close of 1955. This represents 10% increase over 1953.

Dr. Blasingame to Be Guest Speaker at Annual Meeting

● Dr. F. J. L. Blasingame, a member of the Legislative Committee and the Board of Trustees of the A.M.A., will be the guest speaker on President's Night, Monday, April 9, at the Annual Meeting in Memphis. Dr. Blasingame is the immediate past-president of the Texas Medical Association and he lives and practices at Wharton, Texas. It is stated that Dr. Blasingame is a physician who epitomizes the scope, the variety, the vitality of Texas Medicine today. This Association is fortunate to obtain a speaker of Dr. Blasingame's caliber and it is expected that a large number will want to hear him on President's Night, April 9.

Postgraduate Education Program Adopted for Year

● At a recent meeting of the Committee on Postgraduate Education, the Committee selected the following subjects to be presented in thirty centers throughout the State in 1956. The Symposium Programs will be on "Traumatic and Emergency Surgery," "Jaundice," "Chest and Abdominal Pain," and "Cancer—Its Detection and Treatment." Three presentations will be made in each of ten Councilor Districts throughout the State.

Public Service

THE TENNESSEE TEN

A.M.A. Speaker at Knoxville Academy

● Steve Donohue of the American Medical Association Public Relations Department was the key-note speaker at the Knoxville Academy of Medicine meeting January 10.

At the meeting, which was devoted entirely to public service, Donohue said Knoxville's medical public service program compared most favorably with those of other medical societies of its size. He outlined several objectives for organized medicine in the field of public service.

The TSMA Public Service Director was also on the program and outlined briefy the ten points which the Public Service Committee has adopted as goals for 1956.

Ten Goals for 1956

● These include establishment of a press award for the Tennessee reporter turning in the best job of medical news reporting, opinionaire surveys of Tennessee college students, extension of county participation in the Tennessee Indigent Hospitalization Act, promotion of an active television relations program in all areas of the state, support of organized nursing surveys and nurse recruitment plans, coordination of doctor placement activities with the Tennessee Medical Foundation, getting out the vote, public service programs for the medical auxiliary, and stressing ethics not only to medical students but to interns and residents as well, and revision of "The Tennessee Ten."

"Tennessee Ten" Revision Mailed

● "The Tennessee Ten" has already been revised and was mailed to all TSMA members last month. Physicians who did not receive a revised copy of the booklet are requested to write the Public Service Department.

The revision of the Public Service Committee's ten point program was begun last October and came off the press late in December. It brings up-to-date the aims and objectives of the TSMA Public Service Committee and makes room for new developments in professional and public relations.

The central philosophy of "The Tennessee Ten" remains unchanged. The first declaration under policies is as follows:

"1. To support and maintain medical practice as it is found as a bed rock of the American system of free enterprise and unfettered competition. To fight political medicine NOT as an isolated group but as citizens fighting the broader trend toward complete socialism."

First TV Series for Nashville Academy

● The Nashville Academy of Medicine's first television series began January 8 at 3:45 p.m. with the first of thirteen Sunday afternoon programs over WSIX-TV (Channel 8).

Jack Drury, Executive Secretary for the Nashville Academy of Medicine, reports that both the radio and the TV series being presented by the Academy have advertising sponsors.

This certainly points to the popularity of medical broadcasts and telecasts.

Jackson TV Series Ends

● "Your Doctor Speaks," Jackson medical TV series sponsored over WDXI (Channel 7) by the West Tennessee Consolidated Medical Assembly, ended January 2 with its sixth presentation entitled "The Ungeared Mind."

Dr. John R. Thompson, chairman of the Television Resource Committee, West Tennessee Consolidated Medical Assembly, thanked participants and WDXI staff members at the last telecast and revealed that a similar series would be presented at a later date.

He added that the programs had proven very popular and thanked viewers for their wonderful response to the presentations.

Panelists on the last program were Dr. Stanley Crawford, Dr. John Powers, and Dr. Frank Moore, all of Jackson; and Dr. Douglas L. Brint of Bolivar. Special guest speaker was Dr. A. Lawrence White of Central State Hospital, Nashville.

Dr. H. P. Clemmer of Milan, President of the West Tennessee Consolidated Medical Assembly and Moderator for the entire series, concluded by wishing viewers "...a happy, and above all, a healthy New Year!"

1956—A Crucial Year

● As the New Year began, the Nation's Capitol made medical news.

The second session of the 84th Congress opened this month with an agenda containing several bills of great importance to the medical profession.

Social Security Extension

● Perhaps the most important of these is HR 7225, calling for extension of social security benefits. This bill has passed the House and includes a tax amendment for cash payments for disability.

Members of the Senate Finance Committee, scheduled to consider the Social Security Amendments, are Democrats Harry F. Byrd, Va., Chairman; Walter F. George, Ga.; Robert S. Kerr, Okla.; J. Allen Frear, Jr., Del.; Russell B. Long, La.; George A. Smathers, Fla.; Lyndon B. Johnson, Texas; Alben W. Barkley, Ky.; and Republicans Eugene D. Millican, Colo.; Edward Martin, Pa.; John J. Williams, Del.; Ralph E. Flanders, Vt.; George W. Malone, Nev.; Frank Carlson, Kan.; and Wallace F. Bennett, Utah. All can be addressed at the Senate Office Building, Washington, D. C.

Military Dependent Care

● Along with HR 7225 will be a bill setting up medical care for military dependents. The Department of Defense is negotiating with the insurance industry on an indemnity plan, and at the same time with Blue Cross and Blue Shield on service plans.

An extension of appropriations for Salk Vaccine purchase and distribution which expire February 15 is expected.

***Jenkins-Keogh* Faces Test**

● The Jenkins-Keogh bill was reported favorably by the House Ways and Means Committee on the final day of the last session. If made law, it will authorize deferment of income tax on money paid into a retirement fund.

All in all, 1956 points to a crucial year for medical practice in the United States.

During the eighty-third Congress some 300 bills directly affecting the practice of medicine were introduced. All but two of the senators signed their names to one or more of these health measures indicative of the popularity of health programs at the federal level, and the weakening of public opinion in regard to a federal health program. It points to even more drastic action by Congress in the eighty-fourth session because of the election year. The President's health reinsurance program which was defeated during the last session will undoubtedly be re-introduced.

It is most difficult to see who could benefit by health reinsurance. The Insurance companies say there is little demand and believe there would not be much usage of such moneys. Private insurance companies have made incomparable strides during the past several years in bringing health insurance to the people. This bill is not designed to help those who do not have insurance, so its intent is not clearly understood by anyone. Yet medicine can look forward to a great deal of effort upon the part of the administration for the passage of this $25 million reinsurance bill in 1956.

More than 30 separate bills on polio vaccine were introduced within a three-month period after the announcement from Ann Arbor revealing the success of the initial mass immunization program.

Federal aid to education, compulsory disability coverage under the Social Security Act, tax deferred retirement plans, treaty power, etc., combined with federal legislation before mentioned, will play an important part in the future of the medical profession when Congress reconvenes in 1956.

It behooves every state and county medical society, and every physician—to support the American Medical Association in its endeavor to pass legislation which truly benefits the public and to reject those bills which have no apparent advantage.

J. E. Ballentine.

DEATHS

Dr. Clarence Riley Houck, 39, Memphis, died December 10th. Dr. Houck was associate professor of physiology at the University of Tennessee Medical Units. His death was attributed to a heart attack.

Dr. William W. Hill, Sr., 94, Harriman, died December 2nd at the Harriman Hospital.

Dr. James M. Waters, 86, Maryville, died December 28th.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

At the meeting on December 1, the scientific program consisted of the following: "Discussion of Anomalies of Upper Urinary Tract," by Dr. Charles W. Hawkins; "The Diagnosis and Treatment of Meningitis," by Dr. M. F. Langston; and a Case Report, by Dr. Guy M. Francis.

At the meeting on December 8, Dr. J. B. Phillips was elected President-Elect. Dr. Guy M. Francis assumed the presidency for the year 1956 in January. Dr. Harry E. Jones was re-elected Secretary.

Coffee County Medical Society

Dr. Claude Snoddy was elected President of the Coffee County Medical Society at its December meeting. Other officers elected for the year were Dr. Howard Farrar, vice-president, and Dr. Ralph Brickell, secretary and treasurer. Following the meeting, the group was joined by their wives for a Christmas dinner.

Hamblen County Medical Society

Dr. E. Dale Allen, of White Pine, was elected to succeed Dr. D. J. Zimmermann as president of the Hamblen County Medical Society at its December dinner meeting. Dr. James W. Richardson was elected vice-president and Dr. Cecil F. Mynatt, Jr., secretary and treasurer. Twenty-two physicians were present for the meeting.

Greene County Medical Society

Dr. Haskell McCollum was elected president of the Greene County Medical Society at its December meeting. Dr. R. S. Cowles, Jr., was named Vice-President and Dr. R. G. Brown, secretary and treasurer.

Nashville Academy of Medicine and Davidson County Medical Society

The Academy held its regular meeting on

December 13th, which was preceded by a dinner at the Veterans Administration Hospital.

The scientific program consisted of a panel discussion on "Pulmonary Diseases." The panel consisted of Dr. Robert A. Goodwin, Jr., moderator, and Drs. H. R. Anderson, James J. Callaway, Hollis E. Johnson, Robert L. McCracken and Clarence C. Woodcock.

Dr. William O. Vaughan is the president-elect and Dr. Thomas Weaver the secretary-treasurer for 1956. Drs. Robert N. Buchanan, Jr., and Oscar Noel were elected to the Board of Directors.

Roane County Medical Society

The Society held its November 29th meeting in the Oak Ridge Hospital. The scientific program consisted of a paper on "Selection of Patients for Cardiac Surgery." The paper was presented by Dr. Noble O. Fowler, Director of the Cardiovascular Research Department at Emory University in Atlanta.

Knoxville Academy of Medicine

The December meeting was conducted at the headquarters of the Knoxville Academy of Medicine. The program consisted of factual reports by the Chairmen of all committees and the installation of officers for 1956. Dr. B. M. Overholt assumed the presidency. Dr. Sienknecht, retiring President, delivered the President's Address.

Memphis-Shelby County Medical Society

The Society met on November 1 in the Institute of Pathology Building of the University of Tennessee.

The scientific program consisted of the first three prize winners in the Society's Essay Contest for Interns and Residents. The papers presented were as follows: "Burns—A Survey of the Causes of Death" by Dr. Robert C. Reeder. "Regional Enteritis—A Review of the Literature" by Dr. Joe H. Miller. "A Synopsis of Arterial Grafts" by Dr. James W. Pate.

Warren County Medical Society

At the meeting on November 21, the scientific program was presented by Dr. James A. Schuler of Madison Hospital, Madison. He discussed "Potassium Deficiency in Pre- and Postoperative Surgical Patients." Members of the Society were guests of their secretary, Dr. Mary E. Thompson.

Consolidated Medical Assembly

The Society held its regular December meeting at the New Southern Hotel with Dr. Hubert Clemmer of Milan presiding. Dr. Stanley Crawford presented a paper on "Diagnosis of Gastrointestinal Lesions of Infants and Children," and the paper was discussed by Dr. William G. Crook. Dr. Leon Holmes spoke on "Some Common Vascular Diseases Amenable to Surgery." Dr. John Riddler discussed the paper.

The Society elected its officers for 1956, they being Dr. J. T. Holmes of McKenzie, president; Dr. Knox Tate of Bolivar, Dr. Harold Barker of Humboldt, and Dr. Oliver McCorkle of Henderson, vice-presidents; Dr. Stanford M. Herron of Jackson was re-elected secretary-treasurer.

NATIONAL NEWS

Legion Acts on Medical Matters

The American Legion, at its national convention, took these actions. (1) Reaffirmed its policy in support of VA medical care and hospitalization for non-service-connected cases; (2) Rejected Congressional legislation authorizing recognition of chiropractic by VA's medical department; (3) Rejected extension of time for presumptive service-connected of all physical and mental disabilities.

AMA Trustee David Allman, Atlantic City, N. J., addressed the convention, soliciting Legion aid in battling permanent and total disability insurance and demanding passage of the Bricker resolution.

The Executive Committee of the National Rehabilitation Commission perfunctorily adopted a resolution and endorsing maintenance of medico-political relations with A.M.A. to explore policies which may be determined to be beneficial to the aims and ideals of both organizations (Legion and A.M.A.).

VA Administrator Harvey A. Higley disclosed plans are being advanced for replacing 12 outmoded veterans' hospitals.

Medical Care

Much has been heard about the cost of medical care. No doubt some people believe this cost is out of all reason, and absorbs an excessive percentage of incomes.

The A.M.A. conducted an exhaustive study of the economics of medical care over the last quarter-century. In 1930, a fraction less than 4 per cent of personal consumer expenditures went for medical care. This proportion remained fairly constant for years. Since World War II, however, it has risen to about 4.35 per cent. The main reason for that is the tremendous postwar upswing in the birth rate. The increased number of babies and young children has affected not only hospital and obstetric expenditures, but has increased the demand for other medical services, since the youngest age group normally requires the most frequent medical attention.

The U. S. Bureau of Labor provides some important evidence. The Bureau's consumer price index was at 191.9 in 1954. But the index for medical care and drug prices was well under that level,—13.9. And the item indexes for physicians' and dentists' fees were 10.3 and 174.5 respectively.

The A.M.A. also reports that over the 25-year period, the average income of physicians rose at almost exactly the same rate as the average earnings of wage and salary workers. All in all, the situation justifies this A.M.A. statement: "The various providers of services and commodities in the medical care 'field' can well be proud of a quarter century record that included great medical advances . . . while little change occurred in the relative economic position."

The Month in Washington

The second session of the eighty-fourth Congress is under way, and in medical legislation—as in all other fields—this promises to be much livelier than last year's deliberations.

For one thing, neither the Republican administration nor the Democratic party, which is in control on Capitol Hill, got anywhere near as much as it wanted last year in medical legislation.

In front of this political mosaic, these are some of the medically-important issues that will be fought out in Senate and House:

1. Federal guarantee of mortgages on health facilities. This has been on the Congressional calendar for two years; it was pushed hard in 1954, and was given some consideration in 1955. It would mean that the federal government would underwrite mortgages for hospitals, clinics and nursing homes, under certain conditions, thereby allowing some sponsors to obtain loans they couldn't otherwise get, or to obtain them on longer terms and with lower interest.

2. Federal grants for research facilities. Under this plan—approved last session by the Senate—the U. S. would make outright grants to laboratories, medical schools and clinics for building facilities for research in specific diseases, such as cancer and heart diseases.

3. Federal aid to medical education. This perennial project probably is closer to Congressional enactment now than ever before. The most popular bill is one restricting the federal role to grants for building and equipment, with a financial incentive held out to those schools willing to increase their enrollment. This bill may be tied in with some other grants bill, such as the one for research.

4. Salk vaccine. Legislation authorizing federal appropriations for the purchase of Salk poliomyelitis vaccine ($30 million for the current year) expires February 15, virtually insuring Congressional action of some sort before that date. One issue is whether the federal government should continue the grants; more controversial is the question of whether the U. S. should move in to control the allocation and distribution of the vaccine. Allocation and distribution now are handled under a volunteer program supervised by the U. S. Public Health Service.

5. Increases in federal appropriations for medical research. Over the last few years—since the National Institute of Health came of age—Congress repeatedly has increased research grants over the amounts the Budget Bureau allowed Public Health Service to request. Indications are that this year the Budget Bureau may have to give way and allow important increases to be requested of Congress. Congress probably would want to add on its own special additions anyway, resulting in more money than ever before available for work on cancer, heart disease, mental illness, arthritis, blindness and the many other conditions.

6. Social Security covered persons could receive payments beginning at age 50 if determined to be disabled. Under present law retirement payments for all are available at age 65. The bill containing this provision (H.R. 7225) passed the House last session by an overwhelming margin.

It is now before the Senate Finance Committee, where the next phase of the legislative contest will be fought out in 1956.

A list of members of the Senate Committee who will consider this bill (HR 7225) follows: (Senators comprising Senate Finance Committee) Democrats Harry Byrd (Va., Chairman), Walter F. George (Ga.), Robert S. Kerr (Okla.), J. Allen Frear, Jr., (Del.), Russell B. Long (La.), George A. Smathers (Fla.), Lyndon B. Johnson (Texas), Alben W. Barkley (Ky.), and Republicans Eugene D. Millikin (Colo.), Edward Martin (Pa.), John J. Williams (Del.), Ralph E. Flanders (Vt.), George W. Malone (Nev.), Frank Carlson (Kan.), and Wallace F. Bennett (Utah). All can be addressed at the Senate Office Building, Washington, D. C.

Ford Foundation's Grant

Impressive as is the Ford Foundation's grant of $290 million to hospitals and medical schools, it should be remembered that this is only about one-seventh or eighth of the money being spent this year by the Federal government on health and medical programs. . . . Latest information on the cross-country poll by Blue Cross-Blue Shield indicates the majority of local plans are hopeful of guaranteeing the type of coverage the Defense Department is demanding for military dependents. An encouraging development in the social se-

curity picture is the decision of the insurance industry, as announced by the Life Insurance Association in New York to conduct an intensive study of the program.

MEDICAL NEWS IN TENNESSEE

Ford Foundation Grants

The Ford Foundation's grant to hospitals is a supreme example of free enterprise in action.

Dr. Charles C. Trabue, President of the Tennessee State Medical Association, voiced the informed opinion of a grateful state when he said that "These generous grants should result in further improvement in the quality of medical care throughout Tennessee. There are many uses to which each hospital may put these funds to benefit the public." In Tennessee, 19 colleges and universities, which include medical schools, and 45 hospitals, have received grants. The amount designated for hospitals is $2,706,800. Following is a list of those hospitals receiving grants and the amounts given.

$ 63,600—Bristol Memorial, Bristol
13,200—Haywood Memorial, Brownsville
81,100—Memorial Hospital, Chattanooga
86,700—Pine Breeze Sanatorium, Chattanooga
10,000—Little Creek Sanitarium, Concord
19,000—Upland Cumberland Medical Center, Crossville
14,700—Highlands Sanitarium, Fountain Head
26,900—Takoma Hospital, Greeneville
22,300—St. Mary's Hospital, Humboldt
91,300—Memorial Hospital, Johnson City
129,900—Holston Valley Community Hospital, Kingsport
142,100—East Tennessee Baptist Hospital, Knoxville
13,300—East Tennessee Crippled Children's Hospital, Knoxville
109,700—Fort Sanders Presbyterian Hospital, Knoxville
143,900—St. Mary's Memorial Hospital, Knoxville
10,000—LaFollette Hospital, LaFollette
10,000—Lawrenceburg Sanitarium and Hospital, Lawrenceburg
106,000—Madison Sanitarium, Madison College
13,300—Faulkner Springs Sanitarium, McMinnville
250,000—Baptist Memorial Hospital, Memphis
25,700—Collins Chapel Connectional Hospital, Memphis
22,300—Crippled Children's Hospital and School, Memphis
22,300—Hospital for Crippled Adults, Memphis
31,300—LeBonheur Children's Hospital, Memphis
27,700—Memphis Eye, Ear, Nose and Throat Hospital, Memphis
179,300—Methodist Hospital, Memphis
155,000—St. Joseph Hospital, Memphis
12,800—Morristown Hamblen Hospital, Morristown
42,500—Rutherford Hospital, Murfreesboro
138,500—Mid-State Baptist Hospital, Nashville
100,300—Hubbard Hospital-Meharry, Nashville
26,500—Junior League for Crippled Children, Nashville
17,700—Riverside Sanitarium, Nashville
125,800—St. Thomas Hospital, Nashville
168,800—Vanderbilt University Hospital, Nashville
99,800—Oak Ridge Hospital, Oak Ridge
10,000—Medical Division, Institute of Nuclear Studies, Oak Ridge
20,500—Uplands Cumberland Mountain Sanatorium, Pleasant Hill
12,000—International Printing Pressmen's and Assistants' Union Sanitarium, Pressmen's Home
16,100—Chamberlain Memorial Hospital, Rockwood
14,600—Emerald Hodgson Hospital, Sewanee
51,800—Alexian Brothers, Signal Mountain
16,100—Sweetwater Hospital, Sweetwater
12,600—Good Samaritan Hospital, Woodbury

These grants are to be used at the discretion of the hospital board for any program of improvement, expansion of hospital services and research, but not for operating expenses for services the hospitals are currently performing.

Rabbit Fever on Increase in Tennessee

Tularemia or "rabbit fever" is on the increase in Tennessee. Dr. C. B. Tucker, Director of the State Health Department's preventable diseases division, reports that 78 cases of tularemia have been reported during 1955 compared with 43 cases for the same period in 1954. Most have been in Middle Tennessee with Davidson County reporting 10. It was stated that the highest number of cases reported in recent years was in 1946 when 142 cases and 15 deaths were recorded.

Polio on Decline

The number of polio cases in Tennessee in 1955 dropped to less than half the figure of the previous year, and apparently the big reason is the Salk antipolio vaccine.

State Health Department authorities are reluctant to make any flat statements about

the reason for the lower incidence of polio in the state. The State Department of Preventable Diseases Division released the information that there is some indication that for children vaccinated with the Salk vaccine, the case rate of paralytic polio was less than one-half the rate for unvaccinated children.

The University of Tennessee College of Medicine

The University of Tennessee recently received $97,500 of Hill-Burton Act Funds to be used in the construction of a new Cerebral Palsy Treatment Center. The remainder of the $187,000 of the Construction Funds will be given by a philanthropic organization. Other organizations cooperating in the project are Shelby County Chapter of the Tennessee Society of Crippled Children and the West Tennessee chapter of Cerebral palsy.

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Investigators in the Division of Pediatrics have been awarded a total of $35,279 in research grants. A $13,888 grant by the U. S. Public Health Service to Dr. James N. Etteldorf will support a study of the treatment of high blood pressure in children with nephritis. M. & R. Laboratories has granted $4,000 to Doctors J. G. Hughes and Lloyd Crawford for a study of milk allergy in infancy. A grant of $5,000 by the Mead-Johnson Laboratories finances a study of the various routes of administration of drugs to children by Doctors J. N. Etteldorf and J. M. Tuholski. A $12,391 grant from the U. S. Public Health Service has been awarded to Doctors Etteldorf, A. H. Tuttle, C. M. Johnson and Mr. Carl Ferrell, to support studies of the abnormal physiology of sickle cell anemia.

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Dr. R. Eustace Semmes, pioneer in neurosurgery and member of the faculty since 1912, was relieved of his administrative duties on December 31. He will retain his title as professor of neurosurgery.

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Drs. R. R. Overman and George Barlow of the Department of Physiology have received a $7,773 grant for "A Physiological Study of Hyperpyrexmia in Dogs and Monkeys," and a $5,250 grant from the American Heart Association for a study of "The Mechanics of Ionic Distribution in Experimental Cardiovascular Disorders."

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A postgraduate course in Clinical Hematology will be held from February 28 to March 2, under the direction of Dr. L. W. Diggs.

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Two Memphis physicians have been appointed assistants on the faculty,—Dr. Harold T. McIver in the Department of Otology, Laryngology and Rhinology, and Dr. Maury Bronstein in the Department of Internal Medicine.

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The $6,000,000 U. T. Hospital is 90 to 95 per cent complete and should be ready for final inspection by the latter part of January.

March of Dimes Money Spent in Tennessee

The National Foundation for Infantile Paralysis reports that in Tennessee, where it has 96 local chapters, over $3,020,000 has been spent for the care of polio patients since the founding of the Foundation in 1938.

A total of 80 National Foundation scholarships and fellowships has been awarded to Tennessee residents. Professional education grants to Tennessee institutions have totaled nearly $533,000. These grants have gone to Vanderbilt University, the Nashville School of Social Work, and Meharry Medical College.

March of Dimes grants for research in virology and in the treatment of the after-effects of poliomyelitis have been given to the medical schools of both Vanderbilt University and the University of Tennessee.

Tennessee has one of the 14 regional respiratory centers established in the U. S. by the National Foundation for the teaching and demonstration of medical care of polio patients with breathing difficulties. This is the Vanderbilt University Hospital Poliomyelitis Respiratory Center in Nashville. Toward the support of this center the March of Dimes has contributed over $91,000.

In addition to 334,000 cc. of Salk vaccine given Tennessee in 1955, emergency aid in dollars and equipment such as respirators

for polio patients has been generously supplied as needed. In the first 11 months of 1955, a total of $44,550 in emergency aid was sent to 16 Tennessee chapters by the national headquarters of the National Foundation. A total of 15 tank respirators, 16 chest respirators and 17 rocking beds were sent into Tennessee as emergency shipments in the first 11 months of 1955. The previous year the state got 98 respirators and 18 rocking beds.

Vanderbilt University School of Medicine

The thirteenth Abraham Flexner lecturer, Dr. Harold Burn, Professor of Pharmacology, Oxford, England, is in residence and will give the following lectures:

Jan. 11	"The Impact of Science on Life Today"
Jan. 18	"The Common Properties of Different Classes of Drugs"
Jan. 25	"Acetylcholine and the Mechanism of the Heart"
Feb. 1	"Acetylcholine as a Local Hormone for Ciliary Movement"
Feb. 8 & 9	"Symposium on Autonomics"—Dr. Burn, Moderator
Feb. 15	"The Functions of Norepinephrine"
Feb. 22	"The Supersensitivity of Denervated Structures"
Feb. 29	'General—Medical Education"

For the Symposium on "Pharmacology of the Autonomic Nervous System" on February 8 and 9, the following will take part, with Dr. Burn as Moderator:

Dr. Earl Sutherland of Western Reserve University, Cleveland—"Analysis of the Action of Epinephrine and Related Amines in Terms of Action on Enzymes of Carbohydrate Metabolism"

Dr. Robert F. Furchgott, University of Washington at St. Louis—"The Modes of Action of Sympathemimetic Drugs on Vascular Smooth Muscle"

Dr. Mark Nickerson, University of Manitoba, Canada—"Pharmacology of Adrenergic Blocking Agents"

Dr. David Nachmansohn, Columbia University College of Physicians and Surgeons, New York—"Role of Acetylcholine in the Elementary Processes of Conduction"

Dr. Irvine H. Page, Cleveland Clinic Foundation—"The Possible Function of Serotonin in the Nervous System"

Dr. David Grob, Johns Hopkins Hospital Baltimore—"Neuromuscular Transmission in Normal Subjects and in Patients with Myasthenia Gravis and Familial Periodic Paralysis"

All members of the profession are cordially invited.

PERSONAL NEWS

Dr. C. Harold Steffee, Oak Ridge, has been named pathologist for Oak Ridge Hospital.

Drs. John E. Kimball and **William C. Pallas,** Chattanooga, have purchased the Woman's Hospital. They plan to expand the facility.

Dr. Arnold Meirowsky, Nashville, recently lectured at the Postgraduate Convention of the American Urological Society at the Mayo Clinic in Rochester.

Dr. Ralph E. Cross, Johnson City, has been named President of the John Sevier Chapter of the American Academy of General Practice. Other officers were **Dr. Joe C. Crumley,** vice-president, **Dr. Byron Frizzell,** secretary-treasurer. All are from Johnson City.

Dr. Henry B. Gotten, Memphis, has been named Chairman of the Civic Research Committee for Memphis. Dr. Gotten is also President of the medical staff of Gartly-Ramsay Hospital.

Dr. Oliver William Hill, Knoxville, has been elected Chief of Staff of the Children's Hospital. Other officers are **Dr. C. Sanford Carlson** and **Dr. Walter H. Benedict.**

Dr. Phillipp C. Sottong, Chattanooga, has been certified by the American Board of Psychiatry and Neurology.

Dr. N. B. Callier, Chattanooga. has received a certificate from the Interstate Postgraduate Medical Association of North America.

Dr. William Price Stepp is the new president of the Memphis Pediatric Society, succeeding **Dr. Charles H. Housholder. Dr. William Graves** was named vice-president and **Dr. Robert G. Jordan,** secretary and treasurer.

Three Memphis physicians were elected to offices in sections of the Southern Medical Association at the recent convention. They are **Dr. Lewis P. Britt, Dr. R. Leon Bourland** and **Dr. James Brockman.**

Dr. George G. Keener, Kingsport, was recently honored for 50 years in medical practice.

Dr. V. L. Parrish, formerly of Loretto, has moved his office for the practice of medicine to Lawrenceburg.

Dr. Victor Hill, Knoxville, has been re-elected chief of staff at Fort Sanders Hospital. **Dr. Richard Waterhouse** was named vice chief of staff and **Dr. John Burkhart,** secretary. All are from Knoxville.

Dr. Scott Bayer, Nashville, has been named head of the Baptist Hospital Medical Staff. He succeeds **Dr. R. M. Finks.** Other officers named were **Dr. W. D. Sumpter, Jr.,** vice-president. and **Dr. J. Thomas Bryan,** secretary-treasurer.

Dr. John J. Redmon, Memphis, has been named president of the staff at St. Joseph Hospital for 1956. He succeeds **Dr. J. R. Reinberger. Dr. Charles R. Mason** was named vice-president and **Dr. C. D. Hawkes** was re-elected secretary.

Drs. M. D. Ingram, Trenton, **William G. Crook, Hudson Brooks** and **H. T. McIver** of Jackson, recently participated on a television panel at Jackson.

Dr. A. R. Foley, Memphis, was a recent speaker at the Jackson Mental Health Association in Jackson.

Dr. C. Barton Etter, Memphis, is the new chief of the medical staff of LeBonheur Children's Hospital. **Dr. Clyde Croswell** was named vice-president and **Dr. James Etteldorf,** secretary. **Dr. Albert M. Jones** was named chief of medicine and **Dr. Russell Patterson,** chief of surgery.

Dr. M. M. Marolla, Memphis, recently addressed the Memphis Society of X-Ray Technicians.

Dr. George R. Meneely, Nashville, supervised a recent three-day seminar on function of the lungs at Kennedy Veterans Hospital in Memphis.

Dr. Charles C. Trabue, IV, Nashville, President of the TSMA, has been named a member of the board of trustees of the Tennessee Hospital Service Association.

Dr. C. M. Clark, McMinnville, has been elected President of the Warren County Development Foundation, Inc.

Dr. Fred Goldner, Jr., Nashville, announces the opening of his office for the practice of Internal medicine at 1211 Twenty-first Avenue, South.

ANNOUNCEMENTS

Annual Congress on Medical Education and Licensure

The Congress on Medical Education and Licensure will be held on February 13th in the Palmer House, Chicago. A symposium will be presented on "Medical Schools and Their Relationship to Private Practice."

The program will consist of such subjects as: (1) Presentation of a Summary of the Questionnaire Sent to Medical Schools and Medical Societies, (2) The Problems as the Medical School Sees Them, (3) The Problems as the Medical Practitioner Sees Them, (4) From the Legal Standpoint, and (5) Discussions and Audience Participation in a Question Answer session.

International College of Surgeons

There will be a sectional meeting of the International College of Surgeons at the Greenbrier Hotel in White Sulphur Springs, West Virginia, from February 12th to 15th. A splendid scientific program has been arranged. The profession is cordially invited to attend.

Atlanta Graduate Medical Assembly

The Atlanta Graduate Medical Assembly is scheduled for February 20-22. The program has been streamlined and sharpened to incorporate the features which have attracted most favorable comment from the growing numbers of doctors who have been attending each year. The Assembly has arranged for an excellent faculty for the coming session. Highlights of the Assembly include a more extensive social and entertainment program, especially those activities planned for the visiting doctors' wives.

Eighth Annual Institute in Psychiatry and Neurology

This will be held at the Veterans Administration Hospital, North Little Rock, Arkansas, on March 1 and 2, 1956. Many well known neurologists and psychiatrists from neuropsychiatric centers in the U. S. will take part in this meeting.

PLACEMENT SERVICE

The placement service of The Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Department, 322 Doctors Building, Nashville 3, Tennessee.

◆

Locations Wanted

A 31 year old married physician, Protestant, graduate Medical College of Virginia. Eligible for American Board of Internal Medicine. Priority IV. Prefers clinic, will consider assistant or associate. Desires East Tennessee. Available January 1, 1956. LW-197

◆

A 37 year old, married physician, Protestant. Graduate University of Tennessee. At present in U.S. Army Medical Corps. Desires general practice in community 2,000 and above. Would consider clinic, assistant or associate. Available March, 1956. LW-199

◆

A 30 year old, married physician, Protestant. Graduate University of Illinois. Internal Medicine Residency completed June 30, 1955. Priority IV. Now taking a residency in Gastroenterology until June 30, 1956. Desires community 20,000 to 25,000 in Middle or West Tennessee. Available July 1, 1956. LW-200

◆

A 33 year old, married physician, Protestant, graduate University of Tennessee. Three years residency training in Internal Medicine. Desires full or part-time association in Memphis. LW-201

◆

A 26 year old, single physician, graduate University of Tennessee. Completing military service. Desires general practice. Clinic or Industrial. Available April, 1956. LW-202

◆

A 31 year old, married physician, Protestant. Graduate University of Tennessee. Board eligible in Pediatrics. Priority 4. Desires community 20,000 up. Clinic, assistant or associate. Desires West Tennessee. Available now. LW-204

◆

A 33 year old, married physician, graduate Washington University, St. Louis. Certified by American Boards of Internal Medicine. Desires to enter private practice in East Tennessee. Community preferred 30,000. Available immediately. LW-205

◆

Young married physician, Episcopalian. Graduate Vanderbilt Medical School. Has taken Part I, Board of Internal Medicine. Priority IV. Desires association with board certified Internist or group. Available July 1, 1956. LW-206

◆

A 28 year old, single physician. Catholic. Graduate University of Tennessee. Desires general practice in community over 5,000. Available July 1, 1956. LW-207

◆

A 33 year old, married physician. Episcopal. Graduate University of Maryland. Qualified for surgical boards July, 1956. Desires general surgery, would consider clinic, assistant or associate. Available July 1, 1956. LW-208

◆

A 32 year old, married physician. Protestant. Graduate University of Louisville. Now taking second year of pediatric residency. Available July 1, 1956. LW-209

◆

A 34 year old, married physician. Protestant. Graduate St. Louis Children's Hospital. Two years of pediatric training and a third year in progress. Available July 1, 1956. LW-210

◆

A 31 year old married physician, Protestant. Graduate University of Illinois. Desires General Practice in clinic assistant or associate. Priority IV. Available January 1, 1956. LW-211

◆

A 36 year old, married physician. Catholic. Graduate Kansas University Medical School. Diplomate, American Board of Ophthalmology. Desires clinic, assistant or associate. Available January 1, 1956. LW-212

◆

A 27 year old, married physician, Christian. Graduate Tulane University. Three years otolaryngology—Board eligible. One year ophthalmology. Available April 1, 1956. LW-213

Physician Wanted

Excellent Opportunity: Physician to take over general practice, with surgery if desired, in town of 4,500 population. Located northwest Tennessee. Leaving for residency. PW-61

◆

Wanted: An associate, in general practice in clinic with two other physicians. Middle Tennessee. Will guarantee a generous income from the start. Do not need to buy any equipment. PW-65

◆

Small town in West Tennessee desires general practitioner. No other physician in community. All efforts will be made to cooperate with physician in setting up his practice. PW-67

◆

Town in East Tennessee with trade area of 10,000-12,000. Desires general practitioner. One other physician in town. 16 bed hospital in town. Adequate office equipment is already available. PW-68

◆

East Tennessee community desires general practitioner. Population of town 833, of trade area 10,000. One other physician in community with a limited practice. Plans are being made to build a clinic in the near future. Considerable medical equipment has been purchased and is in storage. PW-69

◆

Doctor wanted for general practice in East Tennessee city with exceptionally large trading area. Town is 35,000 population. Good hospital facilities. Beginning salary will be associate with one other physician. PW-70

◆

Physician in small West Tennessee community desires a doctor to practice with him. Small hospital. Wants physician to work toward a partnership. Good opportunity. PW-71

OFFICERS OF THE TENNESSEE STATE MEDICAL ASSOCIATION 1956

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President-Elect—Robert B. Wood, M.D., Medical Arts Bldg., Knoxville
Vice-President—James R. Lewis, M.D., Ripley
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Secretary-Editor—R. H. Kampmeier, M.D., Vanderbilt University Hospital, Nashville
Executive Secretary—Jack E. Ballentine, 319-325 Doctors Building, Nashville

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William J. Sheridan, Jr., M.D., (1956), Medical Arts Building, Chattanooga
Carrol C. Turner, M.D. (1957), 899 Madison Avenue, Memphis
Robert N. Buchanan, Jr., M.D., Doctors Building, Nashville
John R. Thompson, Jr., M.D. (1956), Jackson Clinic, Jackson

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Robert N. Buchanan, Jr., M.D., Nashville
Vice-Speaker—Joseph W. Johnson, Jr., M.D., Chattanooga

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Eighth District—Leland M. Johnston, M.D., Jackson (1957)
Ninth District—J. Paul Baird, M.D Dyersburg (1956)
Tenth District—Arthur R. Porter, Jr M.D., Memphis (1957)

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Charles C. Smeltzer, M.D., Knoxville (1956)
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R. H. Kampmeier, M.D., Nashville (1957)

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Cocke
W. B. Robertson, M.D., Newport, President
Glen C. Shults, M.D., Newport, Secretary

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TENNESSEE STATE MEDICAL ASSOCIATION COMMITTEES, 1956

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Advisory Committee to Woman's Auxiliary—W. W. Hubbard, Chairman, Nashville; John M. Wilson, Johnson City; E. Park Niceley, Knoxville; Roy A. Douglass, Huntingdon; Lynch D. Bennett, Nashville.

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Health Project Contest—Mrs. Oliver Graves, Chairman, Jackson; C. B. Roberts, Sparta; Daugh W. Smith, Nashville; Mrs. Robert Morris, Medina.

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To avoid serious complications from the inguinal hernia in childhood, the family physician should advise only one approach,—that of prompt surgical repair.

INCARCERATED INGUINAL HERNIA IN INFANTS AND CHILDREN—A PREVENTABLE CONDITION

GEORGE W. HOLCOMB, JR., M.D.,* Nashville, Tenn.

The incidence of incarcerated inguinal hernias in infants and children varies from 1.6[1] to 19 per cent[2] in various clinics throughout America. The indications for surgery as practiced in a given community will determine to a considerable degree whether these figures are large or small. If all hernias are repaired as soon as the diagnosis is made, the percentage of incarcerations will be smaller than if surgery is delayed until such emergencies arise.

Intestinal obstruction is the most serious complication of incarcerated inguinal hernia in infants but it is by no means the only one. Prolonged pressure by a hernial mass on the cord vessels may produce gangrene of the testicle. An ovary which has descended through the external ring may twist and become infarcted. The appendix may occupy the hernial sac, become inflamed and perforate. Accordingly, pediatricians and surgeons are beginning to advocate early repair of all inguinal hernias. Unfortunately this practice has not been universally adopted.

Embryology

Infantile hernias occur because of failure of the embryonic processus vaginalis to become obliterated and not because of a weakness of the surrounding tissues, as is often the case with adult hernias. The processus vaginalis is actually the funicular portion of the peritoneum which extends alongside the cord into the scrotum. Normally, as the upper portion of the processus vaginalis becomes obliterated, its lower segment persists as the tunica vaginalis and envelopes the testicle. This usually occurs during the ninth month of gestation. Failure of the funicular processus vaginalis to become obliterated results in the formation of an inguinal hernia.

Clinical Features

In over 8,000 infantile hernias, Gross[1] reported 60 per cent to be on the right side, 25 per cent on the left and 15 percent were bilateral. About 90 per cent were in males.

An inguinal bulge may be observed at or soon after birth. The swelling is more evident when the baby cries, or strains to have a bowel movement. In most instances the hernia is not discovered until the baby is about ten months of age and begins to stand. Some are not discovered for a few years, others not until many years later.

Occasionally older children will complain of vague discomfort but more often there are no symptoms unless incarceration occurs. Indeed, the history may reveal only an inguinal bulge which disappears when the child reclines. Rarely do the hernia contents fill the scrotum in a young patient. Beyond adolescence the scrotum may be filled completely with loops of intestine or omentum.

The fact that about 10 per cent of infantile hernias occur in females should not be overlooked. This is particularly important when a firm, round mass is palpable at the external ring near the labia. Such a mass often is mistaken for a lymph node but experience indicates that it is most likely an ovary which lies within the hernia sac. The

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practice of taking a biopsy of such a mass in this location should be condemned. An ovary which is caught outside the external ring may twist on its vascular pedicle and become gangrenous.

The frequent association of a tense hydrocele with a small hernia above it, regardless of the apparent absence of the hernia on physical examination, merits further emphasis. Until 1950, Potts,[2] at the Children's Memorial Hospital in Chicago, had discovered only one exception to this observation. A hydrocele which fluctuates in size and becomes soft when the child reclines is known as a communicating hydrocele. This is without exception accompanied by a hernia. One of the most difficult decisions to make is whether a baby, particularly a premature infant, or a newborn, has an incarcerated hernia or a tense hydrocele. If the examiner is able to palpate normal cord structures above the upper limit of the mass, he can feel confident he is dealing with a hydrocele. Transillumination may prove helpful in other instances. The decision of whether or not to operate on such a patient is most difficult. On one hand the procedure may prove unnecessary; on the other, it may be mandatory to prevent strangulation and death. These patients should be observed hourly for signs of intestinal obstruction. When it is impossible to rule out an incarcerated hernia, it is safer to operate on the baby than run the risk of intestinal obstruction and bowel perforation.

Of 69 emergency operations for incarcerated inguinal hernia at the Columbus Children's Hospital, Clatworthy[3] reported 84 per cent were performed on children under two years of age. Fifty-six per cent were for babies under six months of age. It is distressing that over half of these 69 patients were known to have an inguinal hernia prior to incarceration. Similarly, Larsen[4] reported that 87.5 per cent of incarcerated hernias at Vanderbilt University Hospital occurred in children under 3 years of age. These statistics, plus the fact that inguinal hernias seldom disappear spontaneously (almost never after the first month), indicate the necessity for early repair of all such hernias in infants and children.

For many years herniorrhaphy was delayed until infants reached two or three years of age. This was largely because of the hesitancy to anesthetize such young subjects and the fear of wound infection in the diaper age group. Also, surgeons knew too well how difficult it is to repair infantile hernias due to the extreme delicacy of the sac and the ease with which it is torn. Today the experienced surgeon does not consider these objections to be valid. In fact, he realizes that even greater technical barriers are encountered when incarceration is present. Under these circumstances edema develops in all abdominal layers which adds immeasurably to the technical difficulties of repairing the hernia. Routine use of penicillin or other antibiotics to prevent wound infection is unnecessary. Infection has been diminished by closing the wound with buried subcuticular silk. This avoids suture holes in the skin which serve as pathways for bacterial invasion when the wound becomes contaminated by urine and feces. Another distinct advantage to subcuticular closure is that there are no sutures to remove.

These facts (see Table 1) constitute ample argument for prophylactic repair of inguinal hernias before incarceration occurs. In such instances the surgeon and anesthetist work under the most favorable circumstances. There is no electrolyte or fluid loss from vomiting. The operative field is not edematous and the operating time is not prolonged because of the necessity to resect a portion of intestine. These patients can be discharged routinely from the hospital the morning following surgery. This not only offers definite financial advantages to par-

Table 1

Reasons for Advising Early Repair of Infantile Inguinal Hernias

1. Inguinal hernias seldom disappear spontaneously.
2. Incarceration under one year of age is more frequent than at any age.
3. An ovary may become incarcerated and gangrenous.
4. A testicle may become gangrenous from pressure of an incarcerated hernia.
5. Parents experience considerable emotional strain until the hernia is repaired.
6. Mortality and morbidity is lower when the operation is performed as an elective procedure.
7. The use of a truss is obsolete and often is ineffective in preventing incarceration.

ents but is important to those who object to prolonged separation from their children.

When bilateral hernias are present it is advisable to repair both at the same operation (Fig. 1). This is preferable to a two stage procedure which not only is costly but exposes the patient unnecessarily to the dangers of repeated anesthetics.

Occasionally parents and physicians alike are disappointed to learn that within a few months following repair of an inguinal hernia, another one appears on the opposite side. Such an infantile hernia was present on the contralateral side at the time of the

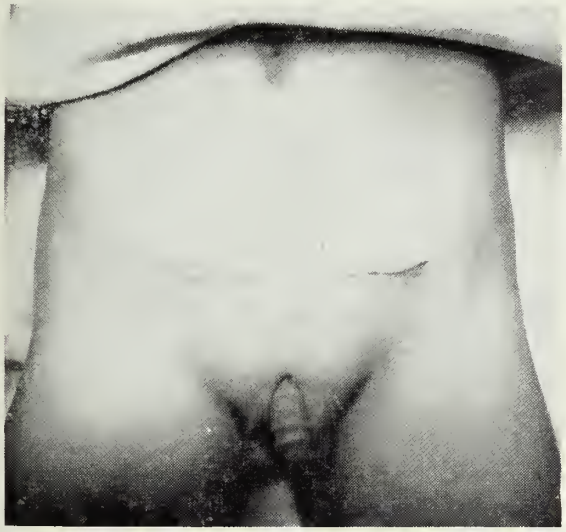


FIGURE 1. A five year old boy following repair of bilateral inguinal hernias at one operation. History of a bulging mass on the left; thickened cord structures on the right as the only indication of a hernia.

first operation but it went unnoticed during the physical examination. This is unavoidable in some instances. However, as one gains experience in rolling the cord structures back and forth beneath the index finger just below the external ring, it is possible to detect the presence of a hernia in most instances. Frequently this can be accomplished with proficiency even when there is no history of one being seen. When the two surfaces of the hernia sac rub against each other, the same sensation is experienced as when rubbing two fingers together while wearing a silk glove. It is advisable to explore the opposite side when there is palpable thickening of the cord structures. Often one is rewarded by finding a hernia which can be repaired without prolonging the operating time more than 15 or 20 minutes. If no hernia is present the wound is quickly closed and no harm has been done.

Operative Technic

An incision is made in the suprapubic crease lateral to the midline. Dissection is continued through the superficial fascia. The external oblique aponeurosis is incised and the cremasteric fascia is separated. The sac is isolated, ligated and amputated. Considerable care must be exerted to prevent tearing the delicate peritoneum. The frequent finding of sliding hernias in infants has not received proper emphasis. Sliding hernias often have the cecum, bladder, or Fallopian tube (Fig. 2) as an integral part of



FIGURE 2. A 10 month old girl immediately following repair of a sliding hernia. Ovary was palpated outside the external ring before the operation; Fallopian tube formed a portion of the hernial sac. Note the only dressing on the wound is collodian.

the wall of the sac. In such instances the sac cannot be ligated as high as is desirable. It is not necessary to open the abdomen through a separate incision which is advocated sometimes for similar hernias in adults. Sliding hernias in infants can be repaired by adhering to the following principles: (1) avoid cutting into the bladder, Fallopian tube or cecum; (2) ligate the sac just distal to the involved viscus; and (3)

if the ligated sac fails to retract inside the internal ring, suture it under the conjoined muscle.

A modified Ferguson repair is then performed. Caution should be exercised to prevent suturing the external ring too tightly, otherwise testicular atrophy may occur. I prefer 6-0 white silk for the subcuticular sutures. Subcuticular black silk is no longer employed because it is possible to visualize these sutures through the skin of thin children for many months after the operation. Heavier sutures often work their way to the surface, therefore fine 6-0 white silk is preferred. Nonflexible collodian is applied to the incision instead of a gauze dressing which would only absorb urine (Fig. 2). Diapers are placed under the buttocks but are not pinned for twenty-four hours. Older children are allowed to walk on the second postoperative day. The collodian is removed in five to seven days, after which the wound requires no further care.

The alternatives to repairing inguinal hernias in children are: (1) the use of a yarn or leather and metal truss to prevent herniation; and (2) the reassurance of the parents that often nothing happens and the hernia can be ignored. In either case such advice may lead to disaster when it is least expected. A truss for infants and children is as outmoded as it is for adults. Such contraptions depend upon pressure over the internal ring to prevent herniation of intra-abdominal contents into the inguinal canal. Application of a truss tight enough to avoid incarceration is followed by excoriation and atrophy of the skin. On the other hand, if the truss is loosened sufficiently to prevent skin irritation, incarceration may occur. There is no guarantee that incarceration will not occur even while a truss is being worn; thus, a false sense of security is maintained by parents and the physician. There is no place in this era of modern medicine for the use of a leather and metal truss in children (Fig. 3). It is difficult to understand why this form of management should be preferred, even temporarily, to surgical correction.



FIGURE 3. A 3 year old girl who was irritable and complained bitterly of skin ulceration produced by the truss. Following surgical repair the patient and parents were freed from the emotional strain of conservative management.

Summary and Conclusions

An inguinal mass which appears when a child cries or stands and disappears when he lies down is almost certain evidence of an inguinal hernia. The diagnosis of inguinal hernias in infants can often be made from the history alone. Seldom is the physician afforded an opportunity to visualize or palpate the bulging hernia in infants. Therefore, in order to establish the diagnosis, he must rely on the history and on palpating the thickened processus vaginalis just below the external ring.

Repair of all inguinal hernias in infants and children as soon as the diagnosis is made is a safe, permanent, yet simple solution to a serious problem which may become increasingly complicated while one procrastinates. Recent advances in anesthesia and pediatric surgical technic insure a shorter hospital stay (two days in most instances) as well as a lower morbidity and mortality rate. This is particularly true when infantile hernias are repaired before the occurrence of incarceration or strangulation.

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A historical review which offers interesting reading and entertainment.

ACNE, THEN AND NOW*

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We often hear that "the old ways are the best." Following this thesis I have done some investigation and would like to present a few older methods of treatment. We will discuss the therapy of a common skin disorder, acne vulgaris, as advocated one hundred to one hundred and fifty years ago.

When the next patient with acne comes into your office, you might make the following suggestions:

1. One jigger of brandy to be taken four times daily.
2. The application of leeches posterior to each ear, and in deep seated lesions, leeches applied directly to the affected areas.
3. Scrubbing with sand or asbestos twice daily.
4. The use of a vinegar and honey lotion, or an emulsion of narcissus roots.

Then if the mother of your teen-aged patient looks startled, assure her that if the aforementioned measures are not successful, you will guarantee results from blood letting.

Acne does not seem to have been recognized as a disease by the oldest Greek physicians. Celsus, who lived in the time of Jesus, called the disease "Varus," and advised therapy by local application of a mixture of turpentine, alum and honey. He remarked that it is hardly worth considering the cure for Vari (or acne) but for the sake of the Roman ladies, who were so solicitous about their beauty, he condescended to mention a few applications which may be of service.

Cassius (100 A.D.) inquires why it occurs in the prime of youth and strength, and believed that the noblest nutritive fluids stagnate and accumulate at the regions affected. Galen (133-200 A.D.) showed an accurate acquaintance with acne, and believed its papules consisted of thickened fluids of the body and advised the use of emollient applications and purgatives.

The terms "Varus" and "Ionthos" were used almost invariably until 1800. Though the name "acne" was used by Aetius in the sixth century, it was forgotten, and then was revived by Willan and Bateman early in the nineteenth century. It is thought that the term acne should be "acme" (meaning the "bloom of life") and Aetius' spelling was corrupted by a careless early copyist.

The ancients used lotions containing vinegar and honey, and at times emulsions of bitter almonds, turpentine, resin, myrrh, alum, soap or the bruised roots of lily, cyclamen, or narcissus.

With these exceptions, there is scarcely a notice of acne to be found in ancient and medieval writings.

Jean Astruc (1684-1766) must be regarded as the founder of modern dermatology. He was the first to show that acne is an affection of the sebaceous glands.

Shortly after 1800, Willan, in England, compiled the first scientific classification of skin diseases. He divided acne into four classes which he called acne simplex, acne punctata, acne indurata, and acne rosacea. This classification still holds good today, although we usually think of "acne rosacea" as "rosacea," and consider it a separate disease. About this time a Dr. Darwin was calling acne "gutta rosea" and divided it into three etiologic types. These were:

1. Gutta rosea hepatica, which occurred with diseased liver in drunkards.
2. Gutta rosea stomatica, occasioned by taking cold drinks and eating cold raw turnips when the body was heated by exercise.
3. Gutta rosea hereditaria, which had no apparent cause.

Bateman believed that violent exercise, especially in hot weather and in heated rooms, when followed by a copious draught of cold liquor, could cause an outbreak.

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*Presidential address, Middle Tennessee Medical Association, November 17, 1955, Fayetteville, Tenn.

Worcester in 1845 described the disease and its etiology rather completely, but he wrongly supposed that the black tip of the comedone to be due to exposure to smoke and dust. Incidentally, the comedone, because of its appearance, was usually called a "grub" or "flesh worm." He advocated the avoidance of all violent exercise and exposure to heat.

The use of raw vegetables in the diet was frowned upon. Not only was it thought that they afforded little nutriment but that they tended to increase indigestion. Then the facial inflammation would be increased in sympathy with the offended stomach. (I wonder how a cooked Chef's salad would taste?)

Hebra (1868) did not believe there was any association of acne with foods. He did recognize that flare-ups of acne occur at times of disordered menstruation, and noted that in the near East, youths castrated to serve in a harem never suffer from acne.

We feel today that there is frequently a definite association of acne with foods of various sorts. For instance chocolate and cola beverages are incriminated all too often when flare-ups of acne occur. Then we know that androgens definitely are of considerable importance in the etiology of acne vulgaris. For this reason estrogenic hormone creams and lotions are being used with varying success in acne therapy. Sexual irregularities, especially ononism, were universally thought to be a contributing factor toward development of this disease.

Hebra states that nothing sounds easier than to cure acne but nothing is further from the truth. "The true conclusion to be drawn from the dictum of Plenck that 'matrimony cures acne' and from the declaration of great surgeons that 'it is ridiculous to trouble oneself about the cure of pimples' is not that this disorder is either insignificant or harmless, but that these writers are hiding their ignorance under an affectation of superiority."

Acne is a difficult disease to treat, as we all know who have tried. I know of no greater disservice in medicine, however, than for the family doctor to tell a teen-aged patient to "forget his or her pimples; they'll go away in time." The scarring caused by this callous and all too frequent attitude can be both physical and mental. The age when these adolescents have acne is most difficult at best. When their heavy psychologic burden and yearning for social acceptance is added to by the presence of severe acne, the strain becomes terrific, and at times critical. A mother recently called to tell me that her son, a six foot four inch high school football player, was crying himself to sleep at night because of his acne. The brooding because of this handicap has led to extreme introversion and even suicide. I have seen few cases that could not be greatly improved by judicious treatment. Now let us look at some of the specific forms of therapy used in the early 1800's.

Cezenave as translated by Bulkley (1852) says that if the patient is young and vigorous, bleeding may be necessary. If the disease affects young females at the first appearance of the menses, he advocates the application of leeches to the upper inner thighs, to promote menstrual discharge. Also for the same purpose, he advocates the direction of warm vapor to the external organs of generation. Leeches were commonly applied behind the ears, two or three times weekly.

Moderate venesection and direct application of leeches to lesions was advocated in indurated acne. Corrosive sublimate, cantharides, arsenic and iodine were Worcester's favorite external application and internal use of tonics of mineral acids in bark infusions were recommended.

The face was treated by rubbing on a salve of iodide of sulfur in lard, or a mercury ointment, by Cezenave. He deplores the use of silver nitrate or hydrochloric acid as a caustic in treating acne lesions, which was apparently prevalent at that time. Sulfur was used a great deal, both externally (as it is today) and internally. Potassium iodide in a decoction of elm bark was used internally. Silver chloride in lard was applied as a local application. Lotio alba in the same formula used today was in use over 100 years ago.

Hebra said, "Excess in spiritual liquors keeps the sebaceous gland contents liquid so as not to accumulate in the ducts. This will, of course, be unfavorable to the devel-

opment of acne, so we may prescribe alcoholic drinks, especially brandy as internal remedies against acne."

It is interesting to note the similarity of several old forms of treatment to those in use in this modern day. For example:

Treatment with mechanical abrasion with sand was advocated by Ellinger (1877) and then was dropped shortly thereafter. Of recent years, the plastic surgeons have used sandpaper surgery for the scarring of acne. The sharp curette was used with no scarring and considerable benefit, Bulkley asserts. The surface is gone over roughly, tearing off the tops of the papules and dragging out the plugs from the glands. The high speed rotary wire brush technic, known as "surgical planing," for acne scars seems quite traumatic, yet the patient has a smoother skin for an end result.

Piffard suggests scrubbing with soft soap, and following up with pumice stone or asbestos. (We have the patient scrub with soap today, and I have often found that the abrasive effect of Lava soap is of great benefit in treating boys with very oily skin, and many comedones.)

In cases needing something beyond mere washing, a sulfur paste was applied by means of a camel's hair brush. The next morning this was washed off by a lotion obtained by pouring hot water over bruised almonds. A mercurial plaster left on all night was advocated. Erasmus Wilson used sulfur in wine or brandy as a local application. Various astringent lotions containing alcohol are found to be of value, so Dr. Wilson was not far off in using wine or brandy locally.

The use of a violently acting medication causing acute inflammation, even blistering, was occasionally of great value, with much improvement after the inflammation subsided. An example of a lady treated by a bruised parsley poultice was given. Acute inflammation was followed by cure according to Bateman. We use this method today when carbon dioxide snow, sulfur and acetone are made into a slush and applied to the face. Frequently there is improvement when the inflammation subsides, and after peeling takes place. Oxymuriatic acid was given in water to patients with acne rosacea, just as dilute hydrochloric acid is used today. The reason then was just as obscure as now.

Soap in various forms was in great favor of most authors of the time. Some, however, preferred to use infusions and decoctions of various herbs and other vegetable materials for cleansing. A warning against soap was sounded by Dr. Shattuck in 1808, when he told the following story on "the most reliable authority."

"The late Dr. Fay was called to two African children who were covered over their entire body with body lice. He ordered them to be immediately washed all over with warm soap suds. The *sudden* removal of the irritation by the *sudden* destruction of the Vermin, additional to the warmth of the water, suddenly checked the motions of life, and the children dropped down, and expired immediately!"

ERRATA

"Diagnosis and Treatment of Ileus"

(J. Tennessee M. A., December, 1955)

Page 454 (Column 1, Line 8) should read ". . . urinary tract disease, ureteral catherization . . . ." (Column 2, Line 8) should read ". . . . irritative conditions (as ulcers or worms), . . ." Page 455 (Column 1, third line from bottom) should read ". . . intussusception or neoplasm . . ."

CASE REPORT

The diagnosis and management of pheochromocytoma are outlined by this case report.

Pheochromocytoma

William R. Cate, Jr., M.D., Nashville, Tenn.

Surgically curable forms of hypertension are rare. Among them are those secondary to hyperfunctioning tumors of the adrenal medulla, pheochromocytoma. Their symptomatology results from increased amounts of circulating epinephrine and/or norepinephrine. These substances are produced by the tumors and secreted either intermittently or continuously. The clinical picture is thought of as being characteristically that of paroxysmal hypertension. However, only 25 to 33 per cent of such cases fall into this category. (Table 1.) The case to be reported is illustrative.

Table 1

The Clinical Syndromes Which May Result from Pheochromocytomas

1. Paroxysmal hypertension—25%-33%
   Pallor
   Tachycardia
   Headache
   Precordial and upper abdominal pain
   Hyperglycemia
2. Persistent hypertension
3. Persistent hypertension with hypermetabolism and/or hyperglycemia
4. Intermittent hypertension with hypermetabolism and/or hyperglycemia

Most pheochromocytomas are associated either with a sustained hypertension or hypertension of either type in conjunction with other metabolic derangements. The latter, resulting also from the hormonal output of these tumors, consist of hypermetabolism and hyperglycemia. The presence of a pheochromocytoma should, therefore, be suspected in cases of hypertension which are associated with an elevated basal metabolic rate or elevated blood sugar and glycosuria. Though uncommon, pheochromocytomas occur with greater frequency than is generally appreciated.

Diagnostic studies related to the hormonal output of these tumors fall into three categories. The first is that of provocative agents or those which stimulate the tumor to secrete its retained epinephrine. The most commonly used of these is histamine. The second is composed of adrenolytic agents which reverse the effects of circulating epinephrine. The most efficacious of these have proved to be Regitine and benzodioxane. Third, and apparently more accurate than either of the foregoing, are methods for the determination of breakdown products of epinephrine and norepinephrine in the urine, which have only recently been described.[1]

The localization of these tumors is somewhat complicated. They are usually quite small. Approximately 10 per cent are in extra-adrenal locations in association with pheochrome tissue of the sympathetic nervous system. Only a small number of pheochromocytomas are large enough to be palpable. In about 10 per cent of cases they are multiple. Attempts at localization by the response of the blood pressure to massage may be misleading. Parenthetically, more pheochromocytomas occur on the right side than on the left. Pyelograms, either intravenous or retrograde, are only occasionally of assistance. Injections of oxygen, either perirenal or presacral, followed by X-ray examination may at times outline such a tumor. It is doubtful that the dangers of such injections justify the results. The location of a suspected pheochromocytoma can, in the majority of cases, only be determined at the operating table.

Approximately 10 per cent of pheochromocytomas are malignant. Persistence of systems after surgery may be due to functioning metastases, the presence of other tumors, irreversible vascular changes, or other etiologic factors.

I wish to report the successful treatment of a single patient with a large pheochromocytoma producing paroxysmal hypertension.

Case Report

L. A. (S. Thomas Hospital, No. 38893) was admitted on January 14, 1954, and discharged on January 26.

This was a 42 year old white man who was admitted with a chief complaint of intermittent headaches. They were described as bursting and throbbing in character. They had been noted first approximately four years before admission. Associated with them were a rapid, pounding pulse and a feeling of faintness.

At the onset of the present illness these parox-

ysmal attacks had a duration of only 2 or 3 minutes, and occurred at intervals of 2 to 3 months. During one such seizure, 3 years prior to admission, the patient had suddenly noted the onset of blindness in his right eye. The attacks gradually increased in duration and frequency. For 2 or 3 months prior to admission they occurred 2 to 3 times every 24 hours, and persisted for one to one and a half hours.

There were no associated symptoms of cardiac failure. The patient's admission to the hospital was precipitated by the discovery of a very high blood pressure during one of the attacks.

Physical examination revealed a white man who appeared to be in good health. His blood pressure was 130/80. The right eye was totally blind. There were no palpable abdominal masses and no elevation of blood pressure was produced by massage over either renal area.

The routine admission blood and urine analyses, electrocardiogram, chest film, plain film of the abdomen, basal metabolic rate, glucose tolerance test, and nonprotein nitrogen were all within normal limits. There was no elevation of blood pressure with the cold pressor test. The Roth-Kvale tests, one of which is depicted in figure 1, were positive on two occasions. There was a questionable deformity of the upper calyx of the right kidney pelvis on intravenous pyelography. It was decided that no air injection studies would be done.

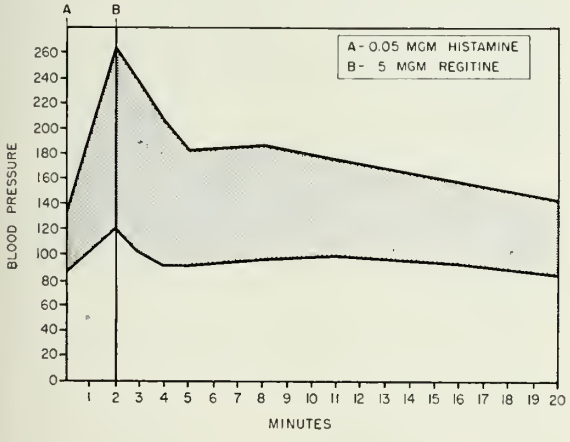


Fig. 1. Shows the use of the Roth-Kvale Test. Since the patient was normotensive between paroxysms of hypertension, a provocative agent (histamine) was administered initially. The paroxysmal episode thus induced was reversed by the use of an adrenolytic agent (Regitine).

Repeated hypertensive episodes occurred spontaneously after admission to the hospital, with a maximum systolic pressure of from 260 to 280 mm. of Hg. These were treated with 5 mg. of Regitine intramuscularly or intravenously. In order to produce better control Regitine was given in a dosage of 50 mg. every 6 hours orally, beginning on the third hospital day. This was subsequently increased to the same dosage every four hours until operation on the sixth hospital day. On the latter schedule the hypertensive episodes were well controlled.

Operation was performed on January 20, 1954. The anesthetic chosen was gas, oxygen, ether. One and one-half hours prior to operation 5 mg. of Regitine was given intramuscularly.

A transperitoneal approach was chosen. The incision was a long transverse one of the "fish mouth" type. Abdominal exploration revealed a large mass over the upper pole of the right kidney displacing it downward and medially. No other intra-abdominal masses were present. It was necessary to make an additional incision, extending upward in the midline to the xiphoid process in order to obtain adequate exposure. With this extension it was possible by blunt and sharp dissection to free up the tumor mass. It was felt, however, that the amount of manipulation of the tumor prior to securing the vascular pedicle was excessive. The tumor was a large one measuring 12 by 8.5 by 5 centimeters, and weighing 282 grams. There was no gross or microscopic evidence of malignancy.

The management of hypertension with Regitine during the operative procedure and the response to the securing of the vascular pedicle are shown graphically in figure 2. Relatively small amounts of norepinephrine plus the Trendelenburg position controlled hypotension adequately during the early postoperative period. No further specific therapy was necessary.

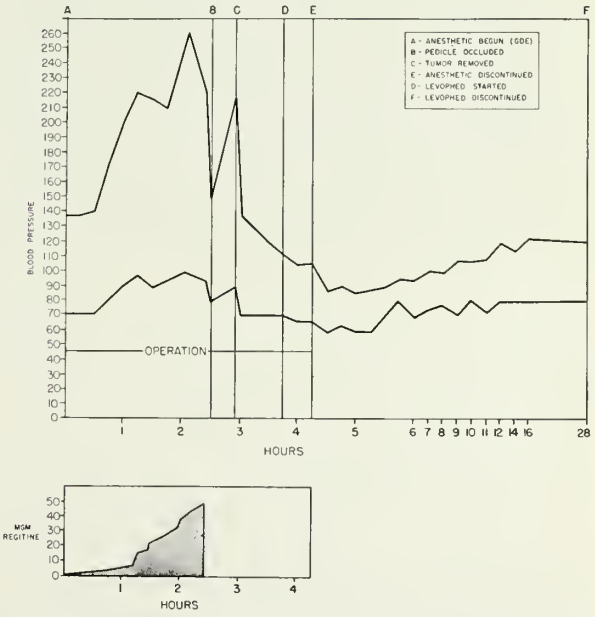


Fig. 2. Shows the variations in blood pressure during the various stages of the operative procedure and in the postoperative period. Amount of Regitine given during the operation is indicated in the lower graph.

The patient was discharged from the hospital on the sixth postoperative day, January 26. He

was last seen on July 7, 1955. At that time he was asymptomatic. His blood pressure was 110/70, and no abdominal masses were palpable.

Discussion

A wide variety of surgical approaches to the adrenal gland have been described. The choice of an incision for the removal of pheochromocytomas must of necessity depend on their peculiarities. The significant incidence of multiple tumors (10 per cent), of extra-adrenal locations (10 per cent), and the difficulties encountered in localization, dictate an incision allowing adequate exploration. Further, without sufficient exposure to allow early ligature of the vascular supply manipulation is likely to be excessive. The increased amounts of circulating pressor substances which result from handling lead to hypertension during the procedure and hypotension postoperatively.

A transperitoneal incision of the transverse type was chosen in this case. We felt that such an approach best met the requirements outlined above, particularly in the absence of localization of the tumor. As events subsequently proved, however, the incision was not felt to provide the desired exposure of the large tumor encountered above the right kidney. Although the mass was successfully removed, relatively large amounts of Regitine administered intravenously were required to control hypertension. In retrospect a better choice would probably have been initial transperitoneal exploration with subsequent conversion to a thoraco-abdominal incision by extension into the right chest. We feel, as others have previously pointed out, that an approach from the ventral aspect will allow earlier ligature of the vascular supply of the pheochromocytoma than the kidney-type of extraperitoneal incision. The latter type of incision has been widely recommended and is perfectly adequate for most operations on the adrenal glands. It probably does not meet the requirements for operation for pheochromocytoma.

As illustrated by the single case report in this communication, the relatively recent addition of potent adrenolytic agents to our armamentarium has greatly increased the safety of excision of pheochromocytomas. It is doubtful that this patient could have survived what was almost certainly a massive infusion of epinephrine during operation without the repeated administration of Regitine.

Summary

A case of pheochromocytoma involving the right adrenal gland is reported. The successful surgical management in this instance is outlined. Some of the problems attendant upon the diagnosis and removal of this interesting group of neoplasms are discussed.

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The diagnosis of early carcinoma of the prostate is difficult. The outlook with radical surgery is quite good.

EARLY DIAGNOSIS AND TREATMENT OF CARCINOMA OF THE PROSTATE

R. MARSHALL PITTS, M.D.,* Nashville, Tenn.

Introduction

It is said that Petroncellus of the school of Salerno, eleventh century, digitally examined the rectum for cancer. Cancer of the prostate, however, has been recognized as a distinct entity only since the beginning of the nineteenth century. Langstaff, in 1817, was probably the first to report an authentic case (in a man aged 61). Billroth, in 1867, performed a lateral perineal prostatectomy, and his patient survived fourteen months postoperatively before dying of recurrences. It was in 1904, that Hugh H. Young described and executed the radical perineal prostatectomy in which the entire prostate with its fibrous sheath, the bladder neck, and the seminal vesicles with their surrounding fascias are removed perineally in one intact specimen.

Clinical Material

This operation has been done at Thayer Veterans' Administration Hospital, Nashville, in 21 instances for early prostatic carcinoma in the five year period, 1949 to 1954. The patients' ages ranged from 51 to 75 years. A family history of cancer was elicited in approximately 25 per cent.

The carcinoma was first detected in 86 per cent of the cases by routine rectal examination. In the remaining 14 per cent it was found by pathologic examination following transurethral resection and suprapubic prostatectomy. Suspicion of cancer was aroused by rectal examination as follows: (1) in 16 of the patients a firm or hard, discrete nodule was present in the posterior lobe; (2) in the remainder a "hard, nodular" gland was felt. The majority had benign prostatic hypertrophy in addition to carcinoma.

Those chosen as candidates for the radical perineal procedure fulfilled the following criteria:

(a) Age less than 75 years.
(b) Tumor limited to the prostate,
    (1) No local extension (on palpation),
    (2) No metastasis as determined by X-ray study,
    (3) No elevation of acid and alkaline phosphatase values.
(c) General physical condition such that the patient was considered able to undergo major perineal surgery.

At this hospital 22 prostates have been biopsied. Sixteen of these showed cancer. Perineal biopsy was employed in 50 per cent of this series. The pathologic diagnoses in all were adenocarcinoma. The cancers were confined to the prostatic capsule in 16 patients. Of the 5 cancers not confined within the capsule, all involved the seminal vesicles, and one involved the transverse perineal muscles.

The postoperative morbidity was largely limited to two conditions: (1) impotence, and (2) incontinence. The exact number who became impotent is not known, but it was present in all those questioned concerning this. Four patients (20 per cent) were temporarily incontinent (for less than one year); one patient had permanent incontinence (he was the first patient in the series and had extension of the cancer beyond the prostatic capsule with involvement of the external sphincter). Stress incontinence of varying degrees is present in 30 per cent of the series.

The two fatalities were men who died cardiac deaths postoperatively. The mortality from cancer to this date is zero.

Fifteen of the original 21 patients operated upon were living and well without evidence or recurrence or metastases at the most recent follow-up examination. Four patients, in whom the cancer was not con-

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fined to the capsule, were treated in addition by orchiedectomy and estrogens (one received local X-ray treatment also). At a recent examination all were doing satisfactorily and showed no evidence of metastasis.

Discussion

Numerous studies have been made to determine the prevalence of carcinoma of the prostate. Edwards, Steinthorsson, and Nicholson,[1] in 173 routine consecutive autopsies, found cancer of the prostate in one man out of five over the age of 40 years. According to Rich,[2] 28 per cent over 70 have it. Carcinoma of the prostate is the second most common malignancy in men. It develops in any part of the gland but most commonly in the posterior lobe. It usually developes immediately beneath the capsule, and sometimes presents in more than one individual focus. Although often associated with benign prostatic hypertrophy, prostatic cancer bears no relationship to this, to inflammatory disease or to prostatic calculi.

Kimbrough,[3] U. S. Army Medical Corps, was instrumental in including the routine rectal examination in the annual army physical examination of officers. This is a most important step in the diagnosis of prostatic cancer. Whereas, in the general population only about 5 per cent of prostatic cancers are judged operable when first detected, in Walter Reed Hospital 66 per cent have been found operable since 1946. This favorable rate was directly due to the enforced annual rectal examination.

Diagnosis of advanced cancer is not difficult; diagnosis of early cancer may be. The first symptoms are often obscure and cannot be differentiated from other obstructions at the bladder neck. The initial symptoms may be the result of perineural and bony metastases.

Metastasis is most frequent to the bones: lumbar spine, pelvis, femoral neck, ribs, and other bones. Paget's disease sometimes simulates the X-ray picture of bony metastasis. In the presence of metastatic disease the blood acid phosphatase level is usually abnormally elevated. Unfortunately metastases may be present without elevation of the acid phosphatase. Alkaline phosphatase values above normal indicate osteoblastic infiltrations which, however, may be due to many other conditions besides prostatic cancer.

A nodule felt in the prostate may be cancerous, inflammatory, or a calculus. If not stony hard, and if it disappears upon treatment with massage and hot sitz baths it is inflammatory; if stony hard, this regimen might be dangerous. If the nodule is a calculus, it can be seen on the X-ray film. Diagnosis is established by cytology or biopsy. Rectal examination is the screening process by which candidates for these procedures are chosen. Fourteen of a series of 20 patients with clinical cancer had positive cytological smears for cancer. Careful adequate massage is necessary to obtain adequate smear material. Negative results do not rule out malignancy. Needle biopsy may be utilized but is of no help if no cancer is encountered. The most accurate diagnostic procedure is the perineal biopsy. Colby,[4] at the Massachusetts General Hospital, reported that perineal biopsy plus frozen section was positive in 91.6 per cent of his cases. If there is doubt about a suspicious prostatic nodule, biopsy should be done.

Less than 10 per cent of men with prostatic cancer fulfill the criteria for the radical perineal prostatectomy procedure. These are usually: (a) age less than 75 years; (b) confinement of the tumor to the prostatic capsule; (c) no metastasis; (d) life expectancy of over five years; and (e) ability to withstand major surgery of the perineum and retropubic space. Following radical perineal prostatectomy there is at least a 50 per cent chance for cure. Colby[4] reported a series of 29 patients, 51.7 per cent of whom are "alive and well" five years after the radical operation. He stresses that invasion of the seminal vesicles seriously affects the prognosis but that perineural and capsular invasion do not. The seminal vesicles always should be removed completely. Kimbrough[3] reported a corresponding percentage (50 per cent) of five year survivals of patients treated with radical perineal prostatectomy.

Hudson[5] goes further and treats curable early cancer with radical perineal prostatectomy, plus bilateral orchiectomy and estro-

gens. Forty patients treated in this manner during a recent year were all alive without evidence of metastasis at follow-up examination. Early malignancy discovered in microscopic sections of prostates removed for benign hypertrophy are termed "occult carcinoma." In a study of 41 such patients, 50 per cent survived five years without benefit of radical surgery. Although following clean enucleation of the hypertrophied gland most of these patients have no recurrence histologically, it is felt the better policy to follow up the first operation with the radical perineal procedure.

Carcinoma with local extension but without evidence of metastasis outside the pelvis has been treated from within the bladder with injections of radioactive gold into and around the prostate. Biopsies after injection showed no evidence of neoplasm in 11 of 37 patients with proven tumor. Au^{198} is admirable for this use because of the beta irradiation. Other forms of irradiation more often damage important nearby structures. The only significant complications recorded by Kerr, Flocks, Elkins, and Culp,[6] was rectal irritation in 14 per cent and rectal ulcers in 3 per cent of 129 studied. Scott[7] treated selected cases with local extension with estrogen therapy followed later by radical prostatectomy. He reported a 36 month survival rate of 85.7 per cent compared with 66 per cent in the same period in patients treated by only castration and estrogens. Jewett[8] had no five year survivors, however, among patients treated in this manner.

The rationale for castration is that orchiectomy eliminates the greatest androgenic supply in the male. The prostate is the endocrine end-target of the testis, and the testis is the supporting factor maintaining cancer of the prostate. Organs such as the thyroid, gonads, and adrenal cortex whose function is controlled by hormones from the anterior pituitary gland produce hormones which in turn inhibit the anterior pituitary hormone production (this is a safety valve situation by which an organ can modify the hormonal pressure exerted upon itself). The prostate which does not produce hormones yet whose growth is regulated by hormones (androgens, chiefly) is unable to relieve this pressure. An absence of this feed-back mechanism is one cause of hormonally induced cancer. Androgens stimulate the more differentiated hormone-dependent tumors. Estrogens cause direct destruction of the prostatic tumor cells. Unfortunately some tumor cells always survive. Estrogens inhibit the excretion of gonadotropins by the anterior pituitary, and inhibit androgens competitively (Huggins[9]).

Total adrenalectomy is another form of anti-androgenic palliation. The prostatic cancer best responding to adrenalectomy is the one in which the primary tumor rather than the metastases responded better to orchiectomy and estrogens. Harrison, Thorn, and Jenkins[10] have reported seven cases of advanced cancer treated by adrenalectomy. Appetite, nutrition, sense of well-being, strength, mobility, and physical activity were increased in all cases. Five of six with severe pain from osseous metastases had complete relief. In three, pelvic masses regressed. In one osseous lesions in the spine healed with subsidence of back pain. They gave cortisone for one to three months to nine patients with reactivated cancer who had been previously treated by orchiectomy and estrogens. All but one had an improved sense of well-being and some relief from pain.

At Johns Hopkins Hospital, in 1904 Dr. Hugh H. Young conceived the operation of radical perineal prostatectomy, and first performed it with the assistance of Dr. William S. Halsted. Since then 357 radical prostatectomies have been done there, 320 of which were for proven cancer. In this group the 10 year survival rate was 49 per cent as compared with an expected survival of 53 per cent for persons of the same age and sex in the general population. The operative mortality in 200 operations during the 10 years from April, 1943, to April, 1954, was 3 per cent. The morbidity was minor and temporary. Perfect urinary control occurred in a relatively short time in 90 per cent of the cases. Comparable or nearly comparable patients treated palliatively show 10 year survival rates of only 22 per cent with their disease.

No present treatment for early prostatic carcinoma equals radical perineal prostatectomy. And radical prostatectomy can

be done only when the carcinoma is found early. The cancer can be found early only when rectal examinations are done routinely on all men over fifty, and when suspicious hard nodules are studied more extensively.

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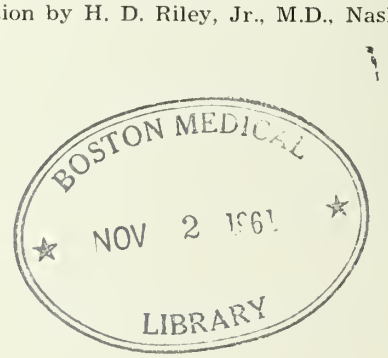
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Syndrome of Left Ventricular-Right Atrial Shunt Resulting from High Interventricular Septal Defect Associated with Defective Septal Leaflet of the Tricuspid Valve. Mildred Stahlman, M.D., Samuel Kaplan, M.D., James A. Helmsworth, M.D., Leland C. Clark, Ph.D., and H. William Scott, Jr., M.D. Circulation 12:813, 1955.

This communication is the result of cooperative efforts between investigators at Vanderbilt University Hospital and the Cincinnati Children's Hospital. Both patients were 4 year old males who had been followed since early infancy for congenital heart disease. The clinical pictures were similar and were characterized by frequent respiratory infections, the absence of cyanosis, precordial bulging, cardiomegaly, loud systolic murmurs along the left sternal border associated with a coarse systolic thrill, and pulmonary hypertension. There was questionable decreased exercise tolerance in one patient but this was definite in the other and later this patient developed cardiac failure. Roentgenographically both children showed marked right ventricular enlargement, prominent pulmonary artery segment, and pulmonary hypervascularity. Cardiac catheterization in both patients indicated a left-to-right shunt with highly oxygenated blood entering the right atrium.

The preoperative diagnosis in both cases was atrial septal defect but other considerations included anomalous pulmonary drainage into the right auricle, ventricular septal defect with tricuspid insufficiency and regurgitation of shunted blood back into the right atrium, and congenital aneurysm of a sinus of Valsalva of the aortic valve with establishment of an aorticoatrial fistula (this anomaly is usually accompanied by a continuous murmur). This degree of pulmonary hypertension is rarely encountered in atrial septal defects in young children. Both patients were operated upon under hypothermia and an extracorporeal pump oxygenator was employed in one. Both patients expired postoperatively, however. At autopsy the basic cardiac anomaly in each case was a high ventricular septal defect of the membranous septum associated with a defective medial leaflet of the tricuspid valve. The probable embryologic origin of such a defect is discussed. Since this report the Cincinnati group has observed another patient with this combination of anomalies. It is theoretically possible to surgically correct such a defect through a right atrial approach. This type of cardiac anomaly should be suspected in the presence of evidence by catheterization of a shunt of highly oxygenated blood entering the right atrium and clinical findings of a coarse systolic murmur and thrill over the midportion of the heart. (Abstracted for The Middle Tennessee Heart Association by H. D. Riley, Jr., M.D., Nashville, Tenn.)



CLINICOPATHOLOGIC CONFERENCE

Baptist Memorial Hospital*

Myeloproliferative Disease (Myelosis)

George F. Bale, M.D.

The patient, a 46 year old female, was first admitted to the Baptist Memorial Hospital on October 5, 1952, for a large left abdominal mass of 2 years duration. This mass had been gradually increasing in size. There had been some weakness, purpuric spots and a frequent maculopapular rash occurring on the skin of the extremities. The initial examination was essentially negative with the exception of the presence of a greatly enlarged spleen and a maculopapular rash on the arms, legs and one large purpuric spot on the left elbow.

The following pertinent laboratory data were recorded on admission: The hemoglobin was 9.5 Gm. and WBC 22,650; differential count: segmented neutrophils 96, band forms 1, lymphocytes 2, and eosinophils 1 per cent. There was considerable variation in size, shape and color of red blood cells. The bleeding time was 4 minutes (Ivy method), coagulation time 10 minutes (Lee-White method), and the fragility test range was 0.50 to 0.28 while the control was 0.48 to 0.36. The V.D.R.L. was negative. On the following day a sternal marrow puncture was performed and reported as a hyperplastic marrow in all cell elements with a moderate maturation defect and a hypochromic anemia. The X-ray of the chest was negative.

On October 9, 1952, the patient was discharged from the hospital with the final clinical diagnosis being deferred. Her anemia was treated with iron and Vitamin B.

The patient was readmitted to the hospital on March 8, 1953. There had been but little change in her clinical condition since her last admission and the spleen had continued to enlarge. She now complained of pressure symptoms in the left upper quadrant of the abdomen. The following positive physical findings were recorded at admission. A large movable nontender mass was found in the left lateral half of the abdominal cavity, extending from the diaphragm to the rim of the pelvis. Over the extremities multiple, discrete skin lesions were found. These lesions were for the most part covered by an eschar. Most of them were raised and averaged from 1 to 2 cm. in diameter. There were other lesions having the appearance of scars of the same size as the active lesion described. The admission hemoglobin was 19.4 Gm., WBC 13,400, differential count showed segmented neutrophils 76, band forms 5, lymphocytes 16, monocytes 2, and eosinophils 1 per cent.

The patient was prepared for surgery and the following day a large spleen was removed. At operation increased capillary oozing was noted following removal of the spleen. The spleen weighed 1,500 Gm. and showed congestion and hematopoiesis. A few hours following operation the patient appeared to go into shock, but seemed to stabilize under supportive therapy and multiple transfusions within a short time.

On March 9, the patient became greatly distended and was relieved by use of Wangensteen suction. Her condition was considered satisfactory. On the same date the following pertinent laboratory data were recorded: RBC 5,359,000; hemoglobin 13.3 Gm.; WBC 4,600, platelets 1,370,000; nucleated reds 3 per 100 WBC, differential count showed segmented forms 91, lymphocytes 1, monocytes 3, eosinophils 3, basophils 2 per cent. There was marked variation in size and shape with tendency toward macrocytes, but the red cells were not well filled with hemoglobin. There was a diffuse basophilia.

On March 15, the patient was noted to be deeply jaundiced; however, she was hungry and was allowed a soft diet. On the same date, the cephalin flocculation was recorded as negative and the bilirubin was reported as 10.91 with the direct portion being 5.55 and indirect 5.36; platelet count was 1,400,000. On March 18, the jaundice was somewhat diminished, but the patient was extremely uncomfortable, breathing rapidly and on examination was found to have considerable fluid in the chest. Bedside chest film showed a very high diaphragm on the right side, being displaced upwards almost to the level of the right hilum. The heart was shifted to the left somewhat.

The following day her condition worsened considerably and the rapid breathing continued. The abdomen was found to be distended with gas, and free fluid was discovered in the peritoneal cavity. Laboratory studies at this time showed: serum potassium 4.04 mEq; CO_2 combining power 63.5 volumes per cent; two nucleated reds per 100 WBC, segmented neutrophils 96, monocytes 3, basophils 1 per cent. Throughout the following day the patient continued to be very short of breath and expired suddenly at 6:05 A.M. March 20, 1953.

Discussion

DR. J. WARREN KYLE: The clinical picture of this patient initially suggested myelocytic leukemia or a lymphoma. There was a striking lymphopenia which sometimes occurs in Hodgkin's disease and this brings lymphoma to mind again. There was no evidence of leukemia in the bone marrow. This is extremely helpful, because this patient could have had a leukemic myeloid leukemia.

She was sent home and returned five months later. At this time the spleen was extremely large. The skin lesions were elevated and discrete but still there was no lymphadenopathy or fever. I had difficulty with those skin lesions. They do not fit at

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all with the diagnosis I'm going to make. The purpuric spots go along quite well, but the other skin lesions bring to mind leukemia or lymphoma which I really don't believe are present here.

A very striking thing is the fact that the hemoglobin jumped from 9 to 19.4 grams, with vitamin B_2 and iron. These hematimics do not cause polycythemia. I rechecked the hemoglobin with Dr. Tacket and it really was 19.4 grams. There was no statement at any time about nucleated red cells, so I have to presume they were not present.

A splenectomy was done promptly after admission. Here is an extremely important bit of information. The protocol said there was hematopoiesis in the spleen. This may be an important tip-off on the diagnosis. In adults there is normally no hematopoiesis in the spleen, and its presence brings to mind the diagnosis of a condition that looks like myelocytic leukemia but isn't. It is called myeloid metaplasia, and the marrow frequently is hypoplastic or may be replaced with fibrous tissue but it may be hyperplastic. At any rate, that particular possibility comes to mind now.

After the operation, troubles came on. There was hemorrhage apparently and shock and several transfusions were given. This goes along with the hemorrhagic tendency suggested by the purpura earlier. Then there was abdominal distention and the red cell count was about normal. The hemoglobin was 12 grams. The white cells had dropped to 4,600. There was still a neutrophilia which is usually not present when you get a leukopenia. Ordinarily the lymphocytes are more prominent percentage-wise in a low white cell count, but here the lymphocytes are almost entirely absent. I can't tell you why. There were some nucleated red cells. I would have been glad to have seen these earlier. Young forms of the red and white cells are usually seen in the peripheral blood in myeloid metaplasia. In this case after part of the hematopoietic system, the spleen, had been removed we see nucleated red cells. Perhaps this was a response to acute blood loss, but I am inclined to think it was because the patient had myeloid metaplasia.

A week later the patient was found to be deeply jaundiced. The cephalin flocculation test was negative. The serum bilirubin showed both direct and indirect bilirubin, so it was not an hemolytic jaundice, alone. There was a striking increase in the blood platelets, 1,400,000, which might be a manifestation of the polycythemia picture or it might be a response to splenectomy. It would certainly have been interesting to have had a platelet count earlier. I wonder if this thrombocytosis had anything to do with the patient's death, which could have been due to some thrombotic episode.

Three days later the patient was dyspneic and was found to have pleural fluid and a high diaphragm on the right. The jaundice was perhaps a little better. The next day the dyspnea was worse, and the patient had ascites apparently and abdominal distention with gas. This gaseous distention evidently was not due to potassium deficiency because the serum potassium was within normal limits. Now there is one thing I'd like to know. Did this patient get progressively more anemic over the last week or so of her life, and did she get more leukopenic. Could you tell me that, Dr. Tacket?

DR. HALL S. TACKET: On the tenth of March which was roughly a week after her surgery, the hemoglobin was 13.3 grams; the red count was 5.35 million; on the twelfth of March, two days later, the hemoglobin was 14 grams. On the 19th of March the hemoglobin was 16 grams and the red count was 6,090,000.

DR. KYLE: She evidently was getting more polycythemic then. In some patients with myeloid metaplasia where there is myelofibrosis or a replacement of the bone marrow, when the spleen is removed most of the hematopoietic system tissue is removed, and they die of anemia, leukopenia, or thrombocytopenia. This patient seemed to be developing polycythemia again at the time of death.

I still feel that this patient did have myeloid metaplasia. She had hematopoietic tissue in the spleen, and that is more or less it by definition: extramedullary hematopoiesis in an adult without evidence of leukemia in the blood or bone marrow.

Myeloid metaplasia is a poorly understood disease. It has some relation to leukemia perhaps, although it is not leukemia. It is related to polycythemia; in fact, some pa-

tients with polycythemia apparently terminate with this disorder. Their bone marrow becomes fibrosed and they develop an enlarged spleen and liver. Incidentally, the hematopoietic tissue is usually in the liver as well as in the spleen. These two are the main organs involved. Myeloid metaplasia occurs primarily without any associated disease. It may occur because of involvement of the bone marrow by cancer, or it may occur in disseminated tuberculosis. In this particular patient there is no apparent associated disease. Occasionally it has been described with lymphoma. Again there are some things in this case that suggest a lymphoma; the lymphopenia which is so striking, and the skin lesions which are papular and elevated. There was no evidence of lymphoma mentioned in the microscopic examination of the spleen, but it is possible that Hodgkin's disease is present and the myeloid metaplasia is associated with it. Whether or not lymphoma is present, I am still sure of the diagnosis of metaplasia of the spleen and probably of the liver.

Leukemia, I've already reasonably well ruled out because of the negative bone marrow and peripheral blood findings. Polycythemia vera is not likely. In the patients with polycythemia vera who develop myeloid metaplasia there is first polycythemia, and then anemia, enlarged spleen, etc. Our patient was first anemic and then became polycythemic. I can't rationalize that, but I don't believe that it is incompatible with the diagnosis of myeloid metaplasia. There is no evidence of metastatic cancer or tuberculosis as being the primary factor.

The patient's death is a little difficult to explain. It is a clinical fact that patients with myeloid metaplasia do poorly after surgery, and splenectomy is usually contraindicated. After splenectomy they may develop anemia and leukopenia and thrombocytopenia, but I take it that they may not do well for no clear-cut reason and the mortality rate is high after surgery. This patient developed jaundice. Perhaps that was because of involvement of the liver. Maybe the patient had a pulmonary infarct or some other infarct that caused hyperbilirubinemia. Hydrothorax, ascites, and dyspnea suggest heart failure, but why she should have developed heart failure is not clear, unless it was based on some thrombotic phenomenon.

My diagnosis is myeloid metaplasia of the liver and spleen, probably of unknown etiology in this particular case. More than likely there will be an excess of the erythyroid cells because the patient had primarily a picture of polycythemia terminally. I think the cause of death was rather obscure, but it was probably a complication of surgery in some way, maybe liver failure plus heart failure or perhaps pulmonary embolism.

DR. TACKET: Thank you, Dr. Kyle, for a very superb discussion of an extremely difficult case. The floor is open for discussion and comment generally.

DR. L. CARL SANDERS: In this type of a patient with a combination of ailments, we must consider many diagnostic possibilities. The lymphomas, for example, produce a wide range of symptoms, many of which are not found in the textbook picture. The clinical symptoms and signs of enlarged spleen, cirrhosis of the liver, jaundice, hemorrhagic skin lesions, variations in the blood picture from time to time, suggest the possibility of Gaucher's disease. Some five years ago we had such a patient diagnosed as Gaucher's disease who presented almost the clinical picture described in the patient under discussion. Our patient's spleen was removed and she remained perfectly well four years, then developed a large liver, ascites, skin lesions, very low platelet count, leukopenia, and at first a high red blood count with rapid fall to a severe anemia. Her decline was rapid and she lived only one month from the onset of the final illness.

DR. TACKET: Thank you, Dr. Sanders. Is there other comment?

DR. ROBERT M. MILES: Considering the polycythemic picture and the post-splenectomy status the possibility of splenic vein thrombosis with proximal propagation and portal vein thrombosis should not be overlooked. This would explain the jaundice, the rapid deterioration, etc.

Another thing to be considered is whether or not the bed of the spleen was drained at surgery. If not, one might consider continued capillary hemorrhage from the opera-

tive site or leakage of pancreatic juice from the tail of the pancreas (which is frequently damaged during splenectomy) with chemical peritonitis as possible causes of the postoperative shock and ascites.

DR. TACKET: Thank you, Dr. Miles. Are there any other suggestions? If not, Dr. Bale, would you report?

DR. GEORGE F. BALE: At autopsy the body was found to be that of a deeply jaundiced woman. There was a recent left subcostal surgical incision which had been closed with silk. On section the peritoneal cavity was found to contain 3,500 cc. of dark reddish, serosanguineous fluid. There was some edema and hemorrhage into the splenic bed. No large vessel in that region was found to have broken loose. Each pleural cavity contained approximately 500 cc. of fluid similar to that observed in the abdomen. The heart weighed 360 grams, and was negative. The lungs were somewhat doughy and the right one weighed 570 grams and the left 420. They had a homogeneous dark bluish-red color from which a considerable amount of serosanguineous fluid exuded. The pancreas, as Dr. Miles suggested, did show some edema and hemorrhage; however, there was no evidence of fat necrosis. The liver weighed 2,210 grams. It was firm, and had a grayish-brown color. The gallbladder contained numerous faceted black stones. The mesenteric and portal veins were examined and found to be dilated and tortous. They were filled with post-mortem clots. There were no antemortem thrombi identified. The lymph nodes throughout the body that were examined were not particularly enlarged or otherwise changed. The marrow of the fourth and fifth lumbar vertebrae, the sternum, ileum and right femur all showed a reddish, moist appearance, without evidence of changes. I will turn the rest of the discussion over to Dr. Diggs.

DR. L. W. DIGGS: We will take up the laboratory and anatomical findings in the order in which the material was examined. The smears and sections of marrow clot obtained 5 months previous to death revealed a decrease in the amount of fat and a proliferation of all of the marrow elements including megakaryocytes, granulocytes, nucleated red cells and histiocytes (reticulum cells) (Figure 1). No definitive clinical diagnosis was made. The possibility of megakaryocytic leukemia or agnogenic myeloid metaplasia was suggested. During the

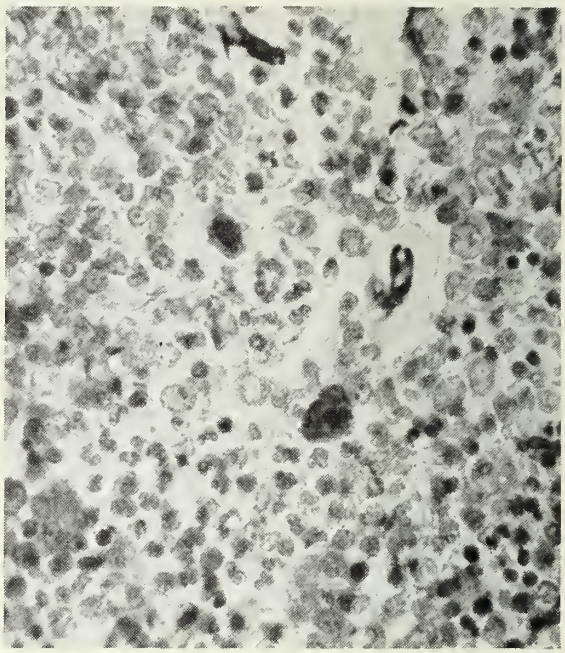


FIGURE 1. Bone marrow Biopsy.

next few months the erythrocyte values increased and approached polycythemic levels.

The surgically removed spleen weighed 1,500 grams and revealed fibrosis of the pulp and occasional islands of hematopoiesis, including megakaryocytes. The findings suggested myelocytic metaplasia.

Following splenectomy there was a marked increase in thrombocytes, a continuation of high erythrocyte values and marked leukocytosis. The patient became jaundiced, ecchymoses and petechiae were observed, and there was an increase in fluids in the serous cavities. The patient died 12 days after splenectomy. Sections of bone marrow from autopsy material revealed hypercellularity in some areas characterized by an increase in myelocytic and erythrocytic cells and megakaryocytes. In other areas there were varying degrees of replacement of the marrow by fibrous tissue and in some areas complete replacement. Megakaryocytes were conscious in areas of increased cellularity as well as in areas of fibrosis. (Figure 2.)

In all organs there was evidence of congestion of blood vessels. There were intravascular thrombi in many organs and fresh

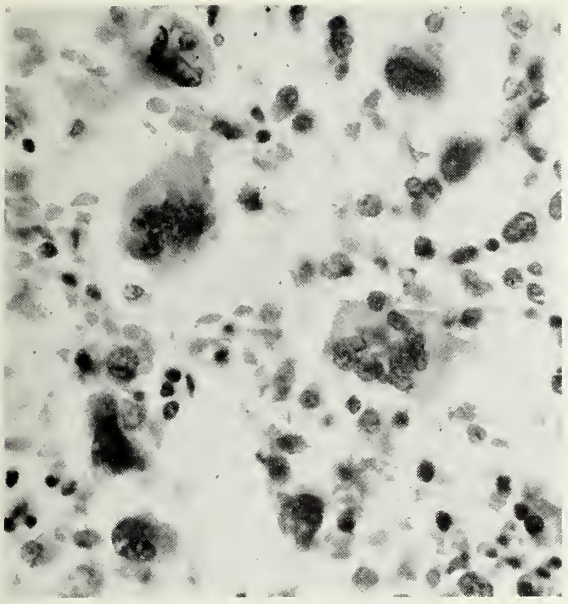


FIGURE 2. Bone marrow showing abundant megakaryocytes.

pulmonary emboli (thrombi?). There was bilateral serosanguinous pleural effusion and serosanguinous ascites. Petechiae and ecchymoses were demonstrable on serous surfaces. The liver was enlarged. There were numerous granulocytes in the sinusoids of the liver, evidences of stasis of bile in the canaliculi and degenerative changes in the liver cell cords in some areas.

Other findings include chronic cholecystitis, cholelithiasis and healed pyelonephritis.

The clinical and anatomical picture presented represents one of the variants of myeloproliferative disease. This condition is poorly defined and is called by numerous names which include such terms as myelosis, myelofibrosis, agnogenic myeloid metaplasia, megakaryocytic myeloid splenomegaly and leukoerythroblastosis. My concept of the condition is that the disease is one in which there is a chronic malignant proliferation of the mesenchymal cells, which cells maintain their potentialities for differentiation in multiple directions—thus accounting for the increase in fibrous tissue as well as the increase in the megakaryocytes, granulocytes and nucleated erythrocytes (Figure 3). The proliferation is not limited to the marrow but involves also the spleen, liver and in some cases the lymph nodes. In this patient the predominant proliferation involved the erythrocytic cells and megakaryocytes. Hyperplasia of these

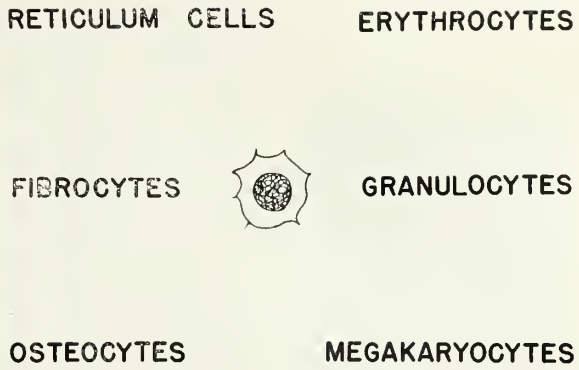


FIGURE 3. Suggested origin of multiple cells involved in this disease.

elements was manifested in the blood by polycythemia and thrombocytosis. Death was apparently due to circulatory failure caused by the stasis of flow of the viscid blood and to multiple intravascular thrombi. Factors in the stasis and thrombosis were the polycythemic state exaggerated by transfusions and the increase in the number of platelets.

The large number of leukocytes in the sinusoids of the liver may have been due in part to a terminal infectious state, but such a finding is also typical of myelosis. The jaundice was of the obstructive hepatogenous type, probably combined with an increase in the rate of red cell destruction and impaired liver function.

Final Pathological Diagnosis:—

Myeloproliferative disease (myelosis) with:—
- Myelofibrosis of bone marrow
- Polycythemia, granulocytic leukocytosis and thrombocytosis
- Myelocytic metaplasia of the liver and spleen

Recent splenectomy
Marked vascular congestion
Multiple vascular thrombi involving multiple viscera
Pulmonary emboli
Jaundice, obstructive, hepatogenous and hemolytic
Petechial hemorrhages
Myocardial hypertrophy and dilatation
Serosanguinous pleural effusion, bilateral
Serosanguinous ascites
Cholelithiasis and cholecystitis, chronic
Pyelonephritis, healed
Pulmonary atelectasis

The President's Page



Dr. Trabue

This issue of the Journal should reach your desk just six or seven weeks before the annual meeting of our State Association. Therefore this seems an appropriate time to stimulate your interest in attendance at that meeting. The next issue of the Journal will contain the complete program but now is the time to make your hotel reservations in Memphis and to mark your calendar in order to avoid conflicts.

The first activity will be Sunday afternoon when the House of Delegates convenes. Fortunately our meeting date does not fall on Easter Sunday this year, and furthermore, the Speaker of the House of Delegates, Dr. Robert Buchanan, has called for the House to convene at 2 p.m. This later hour will allow many delegates to attend church services that morning, either in their own home town or in Memphis.

At this opening session of the House, which will continue into the evening, we will hear the reports of our officers and committees. This will actually be a summary of all of the scientific and non-scientific activities of our Association for the past year. These reports should interest every doctor in Tennessee and I would like to call your attention to the fact that the sessions of the House are open to all members of the Association and not just the delegates. It is hoped that you will plan to attend and learn more about the varied activities of the T.S.M.A.

The general scientific sessions will start Monday morning, April 9, at 9 o'clock. From that hour until noon Wednesday, there will be offered a wide variety of scientific papers in the general session and in the meetings of at least a dozen specialty societies. Surely every physician in the state can find papers on the program which will be of personal interest and value.

The program on Monday night will be somewhat of an innovation this year in that it will combine programs previously a part of the President's Luncheon and the President's Night. There will be no President's Luncheon this year. This year a subscription banquet is planned on Monday night for all members and their wives and following dinner we will enjoy the pleasure of hearing an address by Dr. F. J. L. Blasengame of Wharton, Texas, Vice-chairman of the Board of Trustees of the A.M.A. Practically all of the specialty groups have arranged their programs to avoid conflict with this activity of the State Association and it is believed that we will have a capacity crowd for the banquet and Dr. Blasengame's address.

So plan now to bring your wife and join your friends in Memphis for a good time and a profitable vacation on April 8-9-10-11.



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FEBRUARY, 1956

EDITORIAL

Normally the presence of acid, amino acid and the digestion products of fat result in the elaboration, by the mucosa of the upper small intestine, of the hormone, secretin and pancreozymin. The former causes the secretion of water and bicarbonate, while the latter results in the elaboration of the pancreatic enzymes. The cholinergic impulses from the vagus nerves stimulate mainly enzyme secretion with little effect on the volume of the gastric juice.[1]

In the presence of pancreatitis certain characteristic histologic changes result. Edema and inflammatory cellular infiltration of the interstitial spaces with necrosis and disintegration of acinar cells, intrapancreatic and extrapancreatic fat necrosis, and hemorrhage from necrotic blood vessels. This fat necrosis is peculiar to pancreatitis and is caused by the action of pancreatic lipase on the triglyceride of fat-storage cells. The fatty acids released combine with calcium from the blood and tissue fluid to form calcium soaps. This replacement of neutral fat by calcium soaps and the associated inflammatory process gives rise to the characteristic fat necrosis. In addition, the proteolytic enzymes of the pancreas, trypsin and chymotrypsin act on the blood vessels to produce necrosis which is followed by rupture and local hemorrhage. Indeed injections of these two enzymes subcutaneously is followed by a similar local action on the blood vessels.

Normally pancreatic amylase and lipase secreted by the pancreatic acinar cells pass to a slight degree directly into the blood stream and to a lesser degree across the interstitial cells and thence into the blood stream. Obstruction to the pancreatic ducts either mechanically as the result of disease and consequent edema, or experimentally, will result in an increase in serum amylase due to an increase in the amount of the enzyme which crosses the tissue spaces. Parasympathomimetic agents, by increasing the amount of enzyme and the volume of the pancreatic juice, will cause a rise in serum amylase only when the pancreatic duct is obstructed experimentally. Since fat necrosis frequently occurs without hemorrhagic necrosis and since lipase injected subcutaneously may produce fat necrosis, it is probable that protective mechanisms may operate more effectively against digestion of tissues by proteolytic enzymes than by lipolytic agents.

In pancreatitis the mechanisms which prevent activation of pancreatic proteases (trypsin inhibitor) are overcome and proteolytic digestion of tissues occurs. It is conceivable that in pancreatitis the entrance into the blood stream of trypsinogen and chymotrypsinogen may be a factor in the circulatory shock noted in this condition and perhaps in the changes in the blood clotting mechanisms.

There are four methods of producing pancreatitis experimentally.

(1) Obstruction of ducts, especially when there is an associated stimulation of secretion. This has a great variation in the different animal species.

[1]Grossman, M. L., Experimental Pancreatitis, Arch. Int. Med. 96:298, 1955.

(2) Impairment of blood supply. This is not believed, however, to be a factor in human pancreatitis.

(3) Mechanical or chemical trauma. The forcible injection of bile into the pancreatic ducts was first used by Claude Bernard, in 1856, to produce pancreatitis. Recent studies indicate that the injection of bile under average physiologic pressure produces very little effect, and that injection of saline under force causes little change. There is, therefore, both a mechanical and chemical factor at work.

(4) Metabolic interference with the function of the acinar cells. Deficient protein diets are followed experimentally and clinically by histologic and functional changes in the pancreas. Daily injections of ethionine, an analogue and antimetabolite of methionine, presumably by impairing the mechanism which prevents activation of pancreatic proteases before they reach the intestine, may result in an experimental pancreatitis.

(5) There is a high incidence of pancreatitis in patients with acute and chronic alcoholism. This may be due to: (a) the stimulation of pancreatic secretion, (b) obstruction of the pancreatic ducts by an inflammatory duodenitis, or (c) an abnormality of protein metabolism.

The clinical features of acute pancreatitis were reviewed by Bockus[2] and associates of the University of Pennsylvania Graduate Hospital. Among 78 patients there was demonstrated either biliary tract disease or alcoholism in 86 per cent. Recurrent pancreatitis was more apt to occur in the alcoholic. Over 98 per cent of the patients complained of epigastric pain which usually radiated into the back. On examination the average fever was 100.5 F., the abdomen was usually tender and distended. Over half (52 per cent) of the patients had varying degrees of jaundice, reflecting usually associated biliary tract disease. The shock rate was 6 per cent; peristalsis may be absent or hyperactive.

The more important laboratory findings were abdominal X-ray films suggesting paralytic ileus in 46 per cent of the cases. There were variable chest abnormalities, as shown by X-ray, usual basilar in position, in 52 per cent of the patients. Barium meal studies usually show coarsening of the gastric and duodenal mucosa and suggestive evidence of a mass in the pancreatic region in almost 50 per cent of the cases. The most reliable laboratory evidence is provided, of course, by the serum amylase and lipase tests. One or both of these tests were positive in 90 of the 92 cases. A persistent elevation of the serum amylase usually means that a complication other than pancreatitis exists in the pancreas.

The admission diagnosis was incorrect in 43 per cent of the cases. The mortality in 12 patients operated upon during the acute phases was 25 per cent. Among 82 patients treated medically, there was one death, a mortality of 1.3 per cent.

Medical management[3] includes:

(1) Relief of pain. This is necessary for comfort and relief of harmful vasospasm.

(2) Treatment of shock and replacement of fluids and electrolytic as indicated.

(3) Temporary suppression of pancreatic secretion by gastric suction, and the use of parasympatholytic and ganglionic blocking agents.

(4) Prevention and control of distension by routine methods.

(5) Prevention of suppuration by use of penicillin and broad-spectrum antibiotics.

(6) Management of disturbance of carbohydrate metabolism, includes the careful use of insulin when diabetes is present, as it often is, particularly in the recurrent forms of the disease.

(7) In the detection and management of surgical complications, it is important not to overlook remediable disorders, such as acute cholecystitis or ruptured peptic ulcer.

(8) Prevention of recurrences includes relief of chronic disorders of the biliary tract, the employment of a bland diet, the interdiction of alcohol, condiments and un-

[2]Bockus, H. L., Kalser, M. H., Roth, J. L. A., Bogoch, A. L., and Stein, G.: Clinical Features of Acute Inflammation of the Pancreas, Arch. Int. Med. 96:308, 1955.

[3]Jones, C. A.: Medical Management of Pancreatitis, Arch. Int. Med. 96:332, 1955.

usually large meals. The use of antispasmodics, alkalies and mild sedation may be helpful.

A. W.

★

HOSPITALIZATION OF THE INDIGENT—THE FIRST YEAR

One of several outstanding achievements of the Tennessee State Medical Association, and one which has attracted nation-wide attention in Organized Medicine, has been the Hospitalization of the Indigent Program which it sponsored. In the past several years editorial comment has kept the profession abreast of the planning in the Program.

Now that an Annual Report of the first year's activities has been issued by the Tennessee Department of Public Health it is appropriate that it be recognized and summarized for the busy doctor who can not take the time to read the Report in full. Your Editor has recognized the Report in the Special Item, which follows this editorial. It does seem, however, that officers of county societies who are spokesmen for Organized Medicine, and physicians on the screening committees should have more knowledge of the details of this Report which are provided in adequate tables.

Urgency is lent to a summary of the Report for information of members of the profession because of misconceptions, leading to hearsay misinformation, which have arisen during this first year.

Regulations for the implementation of the Act are obviously a necessity. If a hospital's bookkeeping is such that reimbursable costs can not be proven, a set per diem must be provided. It is surprising that the difference for reimbursable costs was so little as $14.26 for 15 to 29 bed hospitals, and $20.15 for hospitals of 100 or more beds. One would have anticipated this would be greater because of the higher wage scale (nurses, technicians, maids, orderlies, cooks, etc.) in communities supporting 100 bed hospitals. Such hospitals also have the overhead of a house-staff, special laboratories and treatment facilities, as well as supporting outpatient clinics for the indigent or semi-indigent.

The Report dispells any misinformation as to waste in periods of hospitalization. In hospitals of 15 to 29 beds the average period of hospitalization was 10.1 days as against 11.6 days in those of 100 or more beds. This is again a surprise when one considers the fact that the more serious illnesses are likely to reach the larger hospitals for specialized attention.

If the four urban counties seem to receive the lion's share of the hospitalization 2,486 out of 5,989 hospital days, several facts must be considered. These counties are already spending amounts in the neighborhood of $3,000,000 annually toward medical care. What they receive from the State for hospitalization of the indigent is but a small fraction of the total.

A misinterpretation leading to misinformation to the effect that certain hospitals, especially the larger ones, were profiting especially by the Program is readily clarified by perusal of the Report. Naturally 77.8 per cent of the city or county hospitals were used in the Program since they were already caring for the indigent before the Program was established. It is therefore not surprising that the five hospitals receiving individually the largest sums for hospitalization of the indigents should be in order,—(1) John Gaston Hospital, (2) Nashville General Hospital, (3) Knoxville General Hospital, (4) Baroness Erlanger Hospital and (5) Holston Valley Community Hospital. The sums ranged from $16,278.15 in the first instance to $3,189.15 in the last instance. Of the nonprofit association hospitals 52.5 per cent were used in the program, and 22.2 per cent of the proprietary ones.

It is the hope of all who are interested in the Hospitalization of the Indigent that there be no misinterpretation or misunderstanding in relation to this Program. For it was sponsored by the profession and basically is administered by members of the profession. The doctors who recommend hospitalization on an indigent basis, and the doctors who act on the county screening committee decide the *need for hospitalization*, the *indigency* and select the *hospital* for treatment. The administrators of this Act in the Department of Public Health play their part *only* in being assured that hospi-

talization is within the regulations from a fiscal viewpoint and that the records and forms are in order.

This is a program of the doctors of Tennessee and they only are responsible for its basic concepts and administration. This first Annual Report for 1954-55 tells the doctors what they have done.

R. H. K.

★

SPECIAL ITEM

The first Annual Report on the Indigent Hospitalization Program has been published. Your Editor believes that a progress report of probably the most outstanding accomplishment of the Tennessee State Medical Association is in order.—Editor

Indigent Hospitalization Program in Tennessee, 1954-1955*

In the first fiscal year of the Program, ending June 30, 1955, certain experiences have accumulated for analysis and evaluation. These should be of interest to the medical profession and are therefore being summarized in the following paragraphs.

The appropriation for the first year was for only $75,000, to which were added matching funds from participating counties to a net total of $106,875.00, after deducting funds for administration. Of this amount $73,241.06 or 68.5 per cent was spent by the 60 actively participating counties in the first year of the program.

Participation of Counties. Although 70 of the 95 counties voted to take part in the Program, no state funds were spent in 10. The 60 participating counties included 80.9 per cent of the population. Of the 60 counties, 29 used 90 per cent or more of their funds, 23 using all their fund. Less than 50 per cent of their funds were spent in 15 counties. (Fig. 1.)

Characteristics of Patients. Under the Program 507 persons were hospitalized during the first year, the expense being partially or wholly financed by these funds. By race, two-thirds were white and one-third colored; in both, the females exceeded males. By age, 36 per cent of the males were under the age of 15 years, and 27 per cent were 65 years or older; of females 52 per cent were between the ages of 15 to 44, only 13 per cent being 65 years or older.

Causes of Hospitalization. From the detailed table in the Report, it appears that the diagnoses for which physicians of the state requested hospitalization were as follows. For delivery or complication of preg-

PARTICIPATION OF COUNTIES OF TENNESSEE IN INDIGENT HOSPITALIZATION PROGRAM, JULY 1, 1954 - JUNE 30, 1955

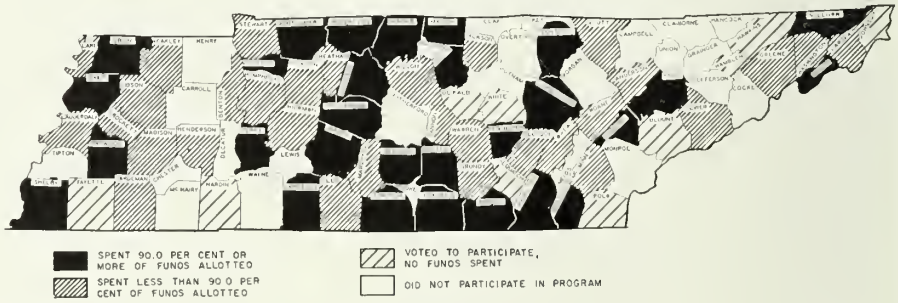


FIGURE 1

COUNTIES WITH AT LEAST ONE GENERAL HOSPITAL OF TEN BEDS OR MORE, ACCORDING TO USE IN INDIGENT HOSPITALIZATION PROGRAM, TENNESSEE, JULY 1, 1954 - JUNE 30, 1955

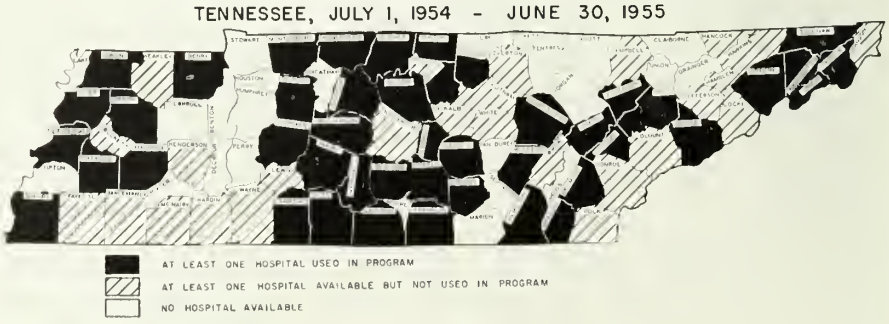


FIGURE 4

*Indigent Hospitalization Program in Tennessee, 1954-55. Annual Report, Tennessee Department of Public Health, Nashville, Tennessee.

(Cuts for figures by courtesy of the Tennessee Department of Public Health.)

nancy and the puerperium, 68 women were hospitalized. For diseases of the digestive system, 64 patients entered the hospital under the Program. "Diseases of the respiratory system ranked third, diseases of the circulatory system fourth, and injuries and poisonings fifth in order of frequency among these patients." (Fig. 2.)

Length of Hospitalization. The 507 patients hospitalized spent a total of 5,989 days in the hospital for an average of 11.8 days. For half of the number the period was from 1 to 7 days, and over 75 per cent of the patients spent 2 weeks or less in the hospital. Diseases of infancy led to the longest periods of hospitalization. Two weeks hospital stay was the average for 45 to 65 years of age and over. The hospitalization for age groups between infancy and the older patients was less than 2 weeks. Next to diseases of infancy, diseases of bone ranked second in duration of hospitalization. (Fig. 3.)

Funds Expended. As noted above $73,241.06 was expended in the hospitalization of the 507 patients, an average of $144.46 per patient. The funds have been spent in accordance with the regulations of the law as outlined previously on these pages.** Hospitals have been paid on the basis of reimbursable cost of a particular hospital, or if such data is not available, at the rate of $6.00 per day. The payments for individual patients ranged from $6.00 to $1,264.56. From the detailed table in the Report it is seen that the highest percentage, 28.6 per cent (145 patients fell in the expenditure of $50 to $99; 15 per cent of the patients cost $25 to $49, and 16.4 per cent cost $100 to $149. The hospitalization of 40 patients (8 per cent) cost over $400.00 each. It should be noted with present limited funds, 16 of the 60 actively participating counties have available net amounts of less than $500.

Hospitals Included. By regulations, hospitals of 10 beds or over may be used under the Program. (Fig. 4.) There are 157 such hospitals, of which only 79 supplied data on reimbursable costs. Such costs ranged from $6.85 to $30.03 per day. Of the 79 hospitals, 35.4 per cent had reimbursable costs of from $15 to $20; only 10 per cent had costs of less than $10.00, and 5 per cent costs of

AVERAGE LENGTH OF STAY IN HOSPITAL OF 507 PATIENTS HOSPITALIZED UNDER INDIGENT HOSPITALIZATION PROGRAM, BY DIAGNOSIS, TENNESSEE, 1954-1955

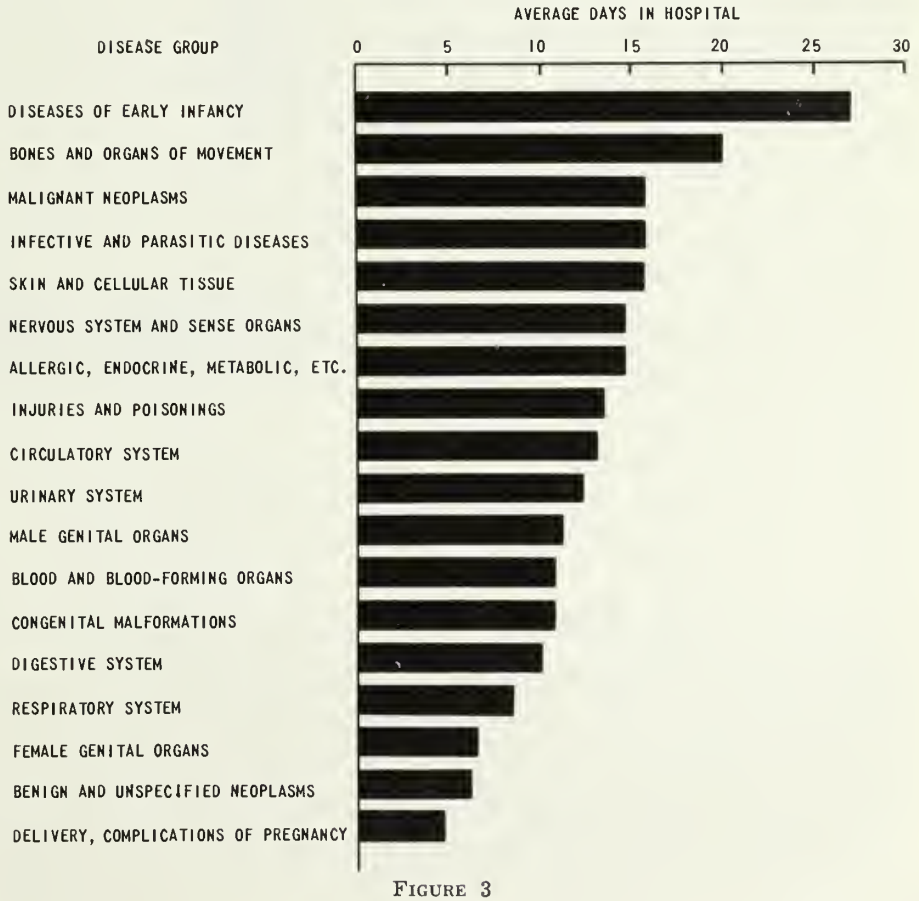


FIGURE 3

**Sharp, W. K.: (Special Item) Hospital Service for the Indigent, J. Tennessee M. A. 48:304, (Aug.) 1955.

more than $25; the average was $16.80 per day. It is of interest that average reimbursement costs for hospitals under 15 beds was $16.97, for hospitals of 15 to 49 beds about $14.50, and $16.52 per day for hospitals of 50 to 99 beds. For the larger hospitals, 100 beds or more, the average cost was $20.15.

In 45 counties, 62 different hospitals were used on the Program. Patients were often sent outside the county for hospitalization either because of no eligible hospital within the county or for special attention in larger hospitals. Almost all of the 27 city or county general hospitals were used, and 22 per cent of the proprietary hospitals. The high average of 16.6 patients per hospital of 100 beds or more is due to the 224 patients from the four large-city counties. When these are excluded the average number of patients, 5.7, for hospitals of 100 or more beds is the same as for hospitals of 50 to 99 beds. The average length of stay in hospitals of 15 to 49 beds was 10 days, for hospitals of 100 or more beds it was 12 days.

The $73,241.06 expended in the first year of the Program for 5,989 patient days averaged a payment of $12.23. An average payment of $6 and $7 went to hospitals of 10 to 14 and 15 to 29 beds; for hospitals of 100 or more beds the average was $14.76. This is much less than reimbursable costs. The estimated cost on a reimbursable basis for hospitalization is $106,002.40. Since only $73,241.06 were expended, the hospitals suffered an estimated deficit of $32,761.34.

NUMBER OF PATIENTS HOSPITALIZED ACCORDING TO DIAGNOSIS, INDIGENT HOSPITALIZATION PROGRAM, TENNESSEE, 1954-1955

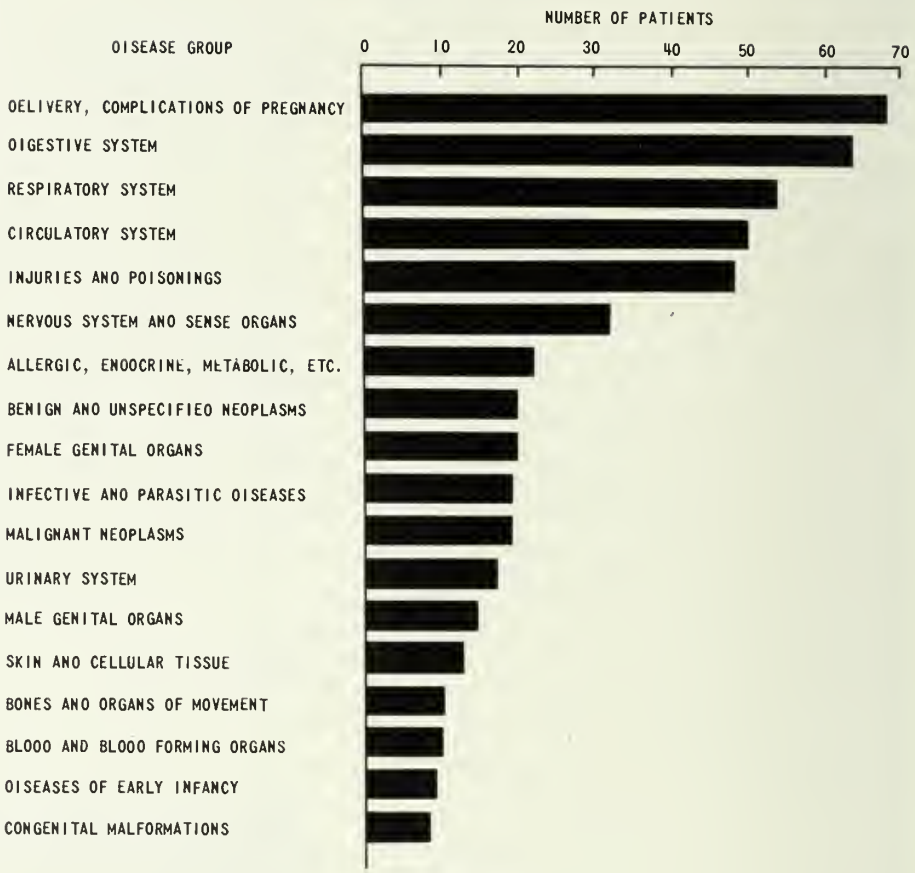


FIGURE 2

DEATHS

Dr. James B. Phillips, Jr., 41, Chattanooga, died January 6th from a myocardial infarct. Dr. Phillips was president-elect of the Chattanooga-Hamilton County Medical Society.

Dr. Mayne B. McCrary, 87, Woodbury, practicing physician in Cannon County, died January 12th at the Rutherford Hospital in Murfreesboro.

Dr. Norris Shelton, Jackson, died December 18th as a result of injuries in an automobile accident. He was 36.

Dr. W. H. Reed, 73, Kingsport, died January 13th at Holston Valley Community Hospital.

Dr. Hugh R. Raines, 63, Memphis, died January 13th at St. Joseph's Hospital. He was coroner for Shelby County and the first medical man to hold the post.

Dr. Sydney Gubin, 66, Memphis, died December 19th at the Kennedy Veterans Hospital.

Dr. James Leslie Bryan, 69, Nashville, died December 20th at his home after an extended illness.

Dr. Leon Martin Lanier, 64, Nashville, died January 16th at the Mayo Clinic.

Dr. C. O. Fowler, 80, Spring Hill, died January 6th in a Memphis Hospital.

Dr. Stephen A. Fowler, 83, Chattanooga, died January 11th in a Chattanooga Hospital.

Dr. Oscar L. Blackwell, 81, Chattanooga, died January 19th at his home.

Dr. Walter White Hannah, 32, Johnson City, died December 24th in Johnson City.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Roane County Medical Society

The Society held its regular meeting on January 31st in the dining room of the Oak Ridge Hospital. The subject "Clinical Use of Radio-Iodine" was presented by the Staff of the Medical Division of Orins. Following the scientific discussion, the Society elected its officers for the year 1956.

Chattanooga-Hamilton County Medical Society

The Society held its installation meeting on January 5 at the Chattanooga Golf and Country Club. Dr. Guy M. Francis was installed as President. The retiring President, Dr. Cecil Newell, opened the meeting with a report of the activities of the Society for the year 1955. Dr. Harry Jones was re-elected to office as Secretary-Treasurer. Charles D. Davidson of Red Stone Arsenal Military Installation, was the guest speaker.

Consolidated Medical Assembly of West Tennessee

At the Society's regular meeting on January 3rd, Dr. J. T. Holmes was installed as President. Other new officers installed were Dr. Knox Tate, First Vice-President; Dr. Harold Barker, Second Vice-President; Dr. Oliver McCollum, Third Vice-President; and Dr. Stanford Herron, Secretary-Treasurer.

The scientific program, conducted in the New Southern Hotel. consisted of the following: (1) Clinical Picture by Dr. John Hughes, (2) Laboratory Diagnosis and Medical Management by Dr. Phil Orpet, Jr., and (3) Surgical Aspects by Dr. Robert M. Miles. All speakers were of Memphis.

Sullivan-Johnson County Medical Society

The Society held its regular meeting on January 5 at the General Shelby Hotel in Bristol. The scientific program was presented by Dr. Julian Beckwith, Professor of Medicine at the University of Virginia. Dr. Beckwith discussed "The Correlation of Gall Bladder and Coronary Disease."

Nashville Academy of Medicine and Davidson County Medical Society

The Society held its regular meeting on January 10 at the Hermitage Hotel. Dr. James C. Gardner was installed as President, Dr. William O. Vaughan as President-Elect for 1957, and Dr. Thomas S. Weaver as Secretary-Treasurer. Dr. Gardner's address was entitled "A Doctor's Responsibility to His Patients, His Fellow Citizens and to Himself."

Knoxville Academy of Medicine

The Society met in the Knoxville Academy of Medicine Building on January 10. The program was presented by the Public Service Committee with Dr. John Burkhart as moderator. Mr. Jesse Ford of the Tennessee State Medical Association and Mr. Stephen Donohue of the Public Relations Department of the American Medical Association were speakers.

Memphis and Shelby County Medical Society

At the annual meeting for installation of officers of the Memphis and Shelby County Medical Society on January 3, Dr. Samuel L. Raines was installed as president, Dr. Harold B. Boyd as president-elect for 1957, Dr. Edward D. Mitchell, Jr., re-elected as secretary, and Dr. Battle Malone, II, as treasurer.

Officers of County Medical Societies

White County. Dr. Donald H. Bradley has been elected President, Dr. Robert F. Boker, Vice-President, and Dr. Harold Andrews, Secretary-Treasurer, all of Sparta.

Hawkins County. Dr. James S. Lyons was elected President and Dr. W. E. Gibbons Secretary-Treasurer, both from Rogersville.

Warren County. Dr. C. E. Peery has been



HOTEL PEABODY

Activities Will Center Here

for the

1956 ANNUAL MEETING

Tennessee State Medical Association

April 8-11

Memphis

Here are some of the interesting activities in store for physicians planning to attend the annual meeting in Memphis . . . Programs in which 14 Specialty Societies will participate . . . three full days for General Scientific Sessions for Doctors in all branches and specialties. Scientific and Technical Exhibits that will prove interesting and helpful . . . Specialty Societies Banquets and Social hours . . . Meetings of the House of Delegates . . . The Board of Trustees meeting . . . Presidents Night with a widely known speaker on a special subject . . . Interesting exhibits . . . Meetings and Sessions of the Woman's Auxiliary . . . The Tennessee Heart Association . . . Annual meeting of the Tennessee Medical Foundation.

THE 121ST ANNUAL SESSION
ARRANGE NOW TO ATTEND

Write to the Hotel Peabody, Memphis for your Hotel Reservations

From the Executive Secretary

ORGANIZATIONAL NEWS

T.S.M.A. Moved To New Headquarters Address Now: 112 Louise Avenue, Nashville 5, Tennessee

Association Occupies New office Building

● January 28, 1956, ended nearly two years of planning, and the last eight months saw the construction and completion of the new headquarters office building for the Tennessee State Medical Association. Saturday, January 28th, was moving day. The T.S.M.A. headquarters is a modern one floor office building with adequate space to house the business offices and administrative personnel of the Association. The building is located at 112 Louise Avenue in Nashville, in the center of the hospital area and some fifteen blocks from the heart of downtown Nashville. The building has adequate office and working space together with a sizeable conference room, suitable for committee and board meetings. Adequate storage space is available in the basement floor of the building. It is modern in every respect and tailor-made for medical association administrative purposes. When in Nashville, make the Tennessee State Medical Association Offices, at 112 Louise Avenue, your headquarters.

More About Annual Meeting Plans

● The plans for the 1956 annual meeting to be held at the Peabody Hotel in Memphis are rapidly taking shape. A considerable number of the specialty societies have already forwarded their schedules and programs, and it is anticipated that the 121st annual session will be one of the best.

House of Delegates to Meet on Afternoon of April 8

● The House of Delegates will meet on Sunday afternoon, April 8, at 2:00 P.M. in the Cadet Room of the Peabody Hotel. It is anticipated that the House will remain in session until dinner time, when an intermission will allow the delegates time for dinner and the first session of the House will be completed Sunday evening, following dinner. Members of the House of Delegates include (1) the elected delegates representing the local medical societies, (2) officers, (3) councilors, (4) members of the Board of Trustees, (5) Past-Presidents and the Commissioner of Public Health from the State of Tennessee, provided he is a member of the State Medical Association, and (6) delegates of this Association to the A.M.A. The second session of the House will begin at 9:00 A.M. on Tuesday, April 10, in the Cadet Room.

President's Night April 9

● President's Night will include a banquet in the Continental Ballroom, beginning at 7:00 P.M. April 9. Following a few brief remarks from the President of T.S.M.A., the guest speaker will be Dr. F. J. L. Blasingame of Wharton, Texas, a member of the Board of Trustees of the American Medical Association and who also is the immediate past president of the Texas Medical Association. Dr. Blasingame has held appointments on the University of Texas Medical Branch practically constantly since his graduation in 1932. He is presently the lecturer in anatomy at the Texas Medical Branch in Galveston. He is a Fellow of the American College of Surgeons, a Director of the Blue Cross Hospital and Blue Shield Medical Services in Texas, Past-President of the Texas Phy-

sicians Committee and Chairman of the Board of Trustees of Wharton County Junior College. Dr. Blasingame's subject on President's Night will be "Organized Medicine and Its Role in Modern America."

Exhibitors Are Important to Annual Meeting

● Again, we will have a large number of exhibitors showing at the annual meeting. Your cooperation and interest in visiting these exhibitors are all important to the Tennessee State Medical Association. Already a total of forty-six companies have reserved space. It cannot be too strongly stressed that it is important for doctors to visit the exhibit booths and to show interest in these firms inasmuch as they are the ones who finance the cost of the meeting. It means that if those concerns did not exhibit with us, a registration fee of $15.00 or $20.00 would be mandatory in order to produce the type of meeting that is conducted. The exhibitors are an integral part of our Association meeting and you will be helping your State Association and its activities if you will merely visit with the concerns represented.

General Scientific Sessions

● In keeping with the practice of past years, the general scientific sessions are scheduled to take place each morning during the meeting. The dates are Monday, Tuesday and Wednesday—April 9-10-11. The sessions, broad in scope and designed to interest both general practitioners and specialists, are planned for each day. Dr. R. H. Kampmeier, Chairman of the Scientific Committee, is working toward conclusion of the program.

Fourteen Specialty Societies to Meet

● During the three-day gathering, other attractions will include meetings of the various specialty organizations and the annual meeting of the Tennessee Medical Foundation. Watch the columns of the Journal for details of the scientific program and other features of the annual meeting which will appear in the March issue of the Journal.

New Booklet for Medical Societies

● Two booklets of vital interest to county medical societies will be published by the American Medical Association early in February. The first—"Guides for Medical Society Grievance Committees"—reviews the findings and recommendations of the special committee on grievance committees appointed by the A.M.A. The second publication—"Report of the Survey on County Medical Society Activities"—will include data on Society meetings, budgets, educational and scientic programs, personnel, building facilities, the work of various kinds of committees and the extent of public relations activities. Copies will be available upon request from the Council on Medical Service of the A.M.A., 535 North Dearborn Street, Chicago 10, Illinois.

New Study Committee Appointed

● The President of the T.S.M.A. has appointed a new Committee to be known as the "Study Committee for a Home and Office Care Program of the United Mine Workers of America." The personnel of the Committee is Dr. George Mahon of Knoxville, Chairman, with the other committee members being Dr. Robert M. Metcalfe, Crossville; Dr. Horace M. Leeds, Oneida; Dr. T. M. Crain, Monterey; and Dr. William G. Shull, Whitwell. The purpose of the Committee's work will be to study the possibilities of a better medical care plan for the beneficiaries of the U.M.W.A.

County Society Secretaries Please Note

● County Society secretaries are urged to forward their societies 1956 officers, and delegates to the State Medical Association's House of Delegates, and candidates for the General Practitioner's award, to the State Executive Secretary as soon as possible. It is essential to have this information for publication in the Journal and the Handbook of the House of Delegates. The delegates' names are particularly needed at this time in order that the Speaker of the House may appoint important reference committees.

Public Service

THE TENNESSEE TEN

Why a Medical Education Week?

● In the first nationwide observance of Medical Education Week, April 22-28, the Tennessee State Medical Association will join Vanderbilt University, the University of Tennessee, Meharry Medical College, and other allied medical and health organizations to present a state-wide program of information.

Specifically, Medical Education Week has three functions: (1) to focus national attention on the significance of medical education and the problems of medical schools; (2) to bring home to the public the contributions of medical science to American life, and (3) to foster public interest, through wide public knowledge, in the private support of medical education.

These three goals can be achieved through the use of all media of communication: newspaper coverage and editorials, radio and TV interviews, medical school open houses, and presentations to civic and fraternal groups. These goals will be achieved, however, only if our entire membership comes forth to participate. Medical Education Week is a mass education campaign requiring the manpower of our entire Association.

These are the facts to be dramatized: the nation's 81 schools are enrolling and graduating more physicians and providing greater research facilities than at any time in history. Translating these achievements in terms of community understanding, they mean the United States, largely because of its excellent medical schools, will continue to be the healthiest nation in the world. A healthier people, protected by expert medical care, attains maximum industrial production, peak efficiency in the armed forces, and increased earning power.

The Positive Picture

● We emphasize that Medical Education Week will stress the positive picture of the medical schools' selfless contributions to the American people. In turn, it will overcome the myths and false impressions identifying the schools as the "closed shops" of the medical profession. With the cultivation of an appreciative public, we believe the financial plight of medical education will be eased.

The A.M.A., the Association of American Medical Colleges, the National Fund, and the American Medical Education Foundation, national sponsors of the Week, are providing national promotion through syndicated news features, magazine articles, network radio and TV programs; it is up to our Association to come out and "sell" the observance in Tennessee.

Assistance Asked

● Dr. L. W. Edwards, chairman of the TSMA Public Service Committee, asks that each of us acknowledge our gratitude to our medical schools by doing everything we can to assist his committee in making a great success of Medical Education Week during April 22-28.

MEDICAL CARE FOR ARMED FORCES DEPENDENTS

● HR 7994 is a highly controversial bill which would afford health insurance for dependents of servicemen. There is no indication whether the insurance would take the form of the usual type service plans or would be based on the indemnity principle. Hearings are presently underway by the House Armed Services Committee led by Chairman Paul Kilday (Democrat, Texas).

A.M.A. witnesses have asked that emphasis in solving the problem of armed services dependent care be on civilian facilities and civilian physicians.

Reviewed here is some of the history leading to present tensions over military dependents' medical service.

The armed services have undergone severe changes in recent years, particularly in the many fringe benefits which professional military people have long demanded and expected as their right. In the past, armed forces personnel could purchase goods through the PX or the Ship's Store at a fraction of their retail cost.

Along with these merchandizing services was free medical care and treatment for dependents living on or near the military reservation. All told, fringe benefits amounted to a sizeable saving for the professional soldier. He could expect his pay to cover his expenses, give him an adequate standard of living, and insure him, through savings, against the future.

In 1949 and 1950 retail merchants rose up in force against the PX and Ship's Store arrangement in the Continental United States. Under the resulting new organization, prices in these stores were competitive with those of other retail agencies. Private enterprise took over in many areas which were closed to army store merchandizing. Cooperatives in some cases were disbanded.

The Causes

● The causes of this reaction against fringe benefits were many. Certainly retail trade associations played an important role in these changes. Public opinion, also, became nettled by the maintenance of a large peace-time army. Many inductees witnessed these benefits for a short time, only to be returned to the unsheltered competition of free-enterprise trade upon being demobilized. Their rancor against special privileges for an organization into which they had been taken against their will is understandable.

There remains, however, a hard core of professional soldiers who have watched privileges dwindle with emotions ranging from rage to despair. These men and their dependents eye this process as an unwholesome revolt, designed to do away completely with the military. Certainly there is something to be said for the theory that the decrease of military fringe benefits has made it more difficult to induce people to choose the military for a career.

All of these factors must be considered if we are to understand the powerful reaction which organized medicine's attitude toward military dependent care has aroused. For unlike socialized medicine, military dependent care has a tradition behind it that will not be denied. It is doubly a sore subject today, because of the distintegration of the fringe benefit arrangement over the past seven years.

More, Not Less, Medical Care

There is no point here and now in arguing the merits of HR 7994 for it is almost assured that important changes will be made in this bill before it is submitted for a vote. The House Armed Services Committee appears to be determined to work out and report a bill which will give dependents more, not less, medical care than they are now getting.

Synopsis and General Outline of Program, 1956 Annual Meeting Tennessee State Medical Association, Memphis, April 8-11

SCHEDULE OF MAJOR EVENTS

HOTEL PEABODY—MEMPHIS

SUNDAY, APRIL 8, 1956

1:00 P.M.	Registration of House of Delegates—Mezzanine
1:00 P.M.	Tennessee Society of Anesthesiology—Room 212
2:00 P.M.	Opening Session of House of Delegates—Cadet Room 210

MONDAY, APRIL 9

8:00 A.M.	Registration—Main Lobby Hotel Peabody
9:00 A.M.	Exhibits Open—Mezzanine and Lobby Floors
9:00 A.M.	General Scientific Session
10:00 A.M.	Public Health Council Meeting and Luncheon—Room 214
1:00 P.M.	Tennessee Academy of Ophthalmology and Otolaryngology—Room 200
12:30 P.M.-5:00 P.M.	Tennessee Academy of Preventive Medicine and Public Health—Room 212
12:30 P.M.-5:00 P.M.	Tennessee Psychiatric Society—Room 213
1:00 P.M.	Woman's Auxiliary Pre-Convention Board Meeting—Room 215
12:00 Noon	Tennessee Society of Pathologists—Room 314
1:00 P.M.	Tennessee Pediatric Society—LeBonheur Hospital Amphitheatre
2:00 P.M.	Tennessee Academy of General Practice—Georgian Room
2:00 P.M.	Tennessee Chapter, American College of Surgeons—Institute of Pathology Building, University of Tennessee
6:30 P.M.	Tennessee Pediatric Society Banquet—Louis XIV Room
6:30 P.M.	Tennessee Academy of Ophthalmology and Otolaryngology Banquet—Cadet Room
7:00 P.M.	President's Night Banquet—Ballroom

TUESDAY, APRIL 10

8:00 A.M.	Registration
9:00 A.M.	Exhibits Open
9:00 A.M.	General Scientific Session—Continental Ballroom
9:00 A.M.	Second Session of House of Delegates—Cadet Room 210
9:00 A.M.	Woman's Auxiliary Business Meeting—Georgian Room
1:00 P.M.-5:00 P.M.	Tennessee Heart Association—Georgian Room
1:30 P.M.	Tennessee Pediatric Society—LeBonheur Hospital Amphitheatre
12:30 P.M.-5:00 P.M.	Tennessee Academy of Ophthalmology and Otolaryngology—Room 200
1:00 P.M.-5:00 P.M.	Tennessee Diabetes Association—Room 212
12:30 P.M.-5:00 P.M.	Tennessee Thoracic Society—Room 213
12:30 P.M.	Tennessee Radiological Society—Room 215
1:30 P.M.-5:00 P.M.	Scientific Meeting—Tennessee Chapter of American College of Surgeons—Continental Ballroom
6:30 P.M.	Social Hour—Tennessee Chapter of American College of Surgeons—Continental Ballroom
7:30 P.M.	Annual Banquet—Tennessee Chapter of American College of Surgeons—Continental Ballroom
6:30 P.M.	Tennessee Academy of General Practice Banquet—Louis XIV Room
6:30 P.M.	Tennessee Diabetes Association Banquet—Room 212

WEDNESDAY, APRIL 11

8:00 A.M.	Registration
8:00 A.M.	Membership Meeting of Tennessee Medical Foundation—Cadet Room
9:00 A.M.	Exhibits Open
9:00 A.M.	General Scientific Session—Continental Ballroom
9:00 A.M.	Board of Trustees Meeting—Room 212
10:00 A.M.	Woman's Auxiliary Post-Convention Board Meeting—Room 215

re-elected President and Dr. Mary E. Thompson re-elected Secretary-Treasurer. Dr. B. C. Smoot is Vice-President.

Henry County. Dr. R. Graham Fish has been elected President, Dr. Arthur C. Dunlap, Vice-President, and Dr. Ray Smith, Secretary. All are from Paris.

Wilson County. Dr. R. C. Kash was elected President, Dr. J. H. Tilley, Vice-President, and Dr. T. R. Puryear, Secretary.

NATIONAL NEWS

The National Legislative Scene

The Administration is pushing its program for broader and more uniform medical care for the families of servicemen.

A new version of a bill was dropped in the hopper on the opening day of this Session by Chairman Carl Vinson of the House Armed Services Committee. It was designed in part to supply answers to a number of questions growing out of earlier versions sponsored by the Defense Department. Actually it raised more questions, which only hearings and testimony from expert witnesses and debate on the floor of Congress can answer.

The bill (H.R. 7994) authorizes, as a matter of right, broad medical care for dependents of the armed forces as well as of Coast Guard, Public Health Service and Coast and Geodetic Survey Personnel serving on active duty. (The bill would authorize health insurance only for dependents of the latter three services.) Separate bills have been introduced in the past providing medical care for dependents of Coast Guard, PHS and Geodetic Survey, but this marks the first time they are brought into the same bill with military personnel.

In provision of services, the bill has no surprises over its predecessors. It calls for diagnosis, treatment of acute medical and surgical conditions, treatment of contagious diseases, and maternity and infant care.

On another point of major interest to physicians, the bill drops out all mention of the home-town medical care plan, which was a part of Mr. Vinson's earlier bill. That bill contemplated use of civilian hospitals and doctors for those dependents who were not near military medical facilities and who had not taken out health insurance, with the government paying part of the cost.

Another area of almost certain debate in the latest bill is the insurance features. There are these main points:

1. A serviceman may elect to rely entirely on the chance of finding space available in a military hospital or clinic for his family, or he may choose protection through an insurance plan.

2. The family deciding on insurance has its choice of going to a military hospital or using civilian resources. The uninsured family could be charged by the military for out-patient care, and would have to pay subsistence costs while in the hospital.

3. A serviceman taking insurance would pay 30% of monthly premiums for a basic plan covering his wife and children, and the entire premiums for coverage of dependent parents and parents-in-law. Parents and parents-in-law who found space in a military hospital, however, would be admitted on the same basis as wives and children.

4. Catastrophic-type coverage, at additional premium.

5. To take care of long term illnesses, the bill provides for transfer of dependents to military facilities once they have used up benefits in an insurance plan. Or if such transfer is not feasible, the government could pay the additional costs for private care.

The bill was introduced before the Defense Department had completed a survey of Blue Shield, Blue Cross and commercial plans to determine to what extent they could provide care under the bill. Conceivably the survey could further change the shape of an already much-revised piece of legislation.

President Eisenhower in his State of the Union message summed up the case for dependent medical care this way: "Much has been done to attract and hold capable military personnel, but more needs to be done."

Roundup of Congressional Action on Medical Legislation

The President sent his Special Health Message to Congress, and the same day Secretary Folsom held a news conference to answer questions about the Eisenhower program. As of now, this is the legislative situation:

Social Security. Hearings opened January 27th before Senator Byrd's Finance Committee, with every indication that the bill (H.R. 7225) will not be rushed through the Senate in the way it was through the House last year. The committee has called on HEW to furnish it with a great deal of background data.

Dependent Care. A House Armed Services Subcommittee has held five days of hearings. The subcommittee will stay on this subject until all witnesses have been heard. The subcommittee (and the full committee) are determined to work out and report a bill this session that will give dependents more medical care than they are now getting.

Salk Vaccine. Surgeon General Scheele was the principal witness before the Senate committee and a House Subcommittee. Before the end of the week both groups voted approval of an extension of the federal program. Chairman Priest said the House Committee would continue to check on the program this year.



The New Home of the Tennessee State Medical Association.

Tennessee State Medical Association and Nashville Academy of Medicine Share New Building

The Tennessee State Medical Association moved it offices on January 28 from the Doctors Building in downtown Nashville to the new home of the Association, a modern red brick building at 112 Louise Avenue.

The Association shares the building with the Nashville Academy of Medicine. The building is in a quiet neighborhood close to the west end side of the Vanderbilt University campus and about a block from St. Thomas Hospital.

The main floor has a spacious entrance hall with the offices of the Association Executive Secretary on the left and those of the Nashville Academy Executive Secretary on the right. Both offices have plenty of window space for light and typify the expansive, open design of all the rooms.

The office of the Association bookkeeper occupies the right side of the hallway facing the offices assigned to the Public Service Director. Farther down the hallway on the left is a conference room, capable of seating all the members of any single committee and admirably suited to the needs of the Association in this regard.

The office of the secretary for postgraduate education leads off of the right rear corner of the bookkeeper's office.

Particularly impressive is the full basement work and storage room which contains files, mimeograph equipment, and bulky supplies. The emphasis everywhere is on space and light. Compared to the quarters previously occupied by the two organizations, it is fair to say that there is easily twice as much office and storage space, and a better working arrangement for lamps, telephones, and other equipment. An abundance of parking space outside, also relieves a serious drawback of the downtown location.

The Tennessee State Medical Association Headquarters Building Committee, consisting of Dr. Daugh W. Smith, Chairman; Dr. Charles C. Trabue IV; and Dr. R. H. Kampmeier, all of Nashville, are due congratulations for an excellent job.

You are invited to inspect the new building at your earliest convenience.

MEDICAL NEWS IN TENNESSEE

The Jackson Clinic's Annual Seminar

The Jackson Clinic of Jackson announces its Third Annual Seminar to be held at the Clinic on Sunday, March 18th. The first session will be at 10:00 A.M., the second at 2:00 P.M. The instructors will be Dr. Richard D. Bryant, Assistant Professor of Obstetrics, University of Cincinnati, and Dr. Carl F. Vilter, Assistant Professor of Medicine. University of Cincinnati and Director of Hematology Laboratory, Cincinnati General Hospital. The general theme of the meeting will be "Medical Complications of Pregnancy." Physicians throughout the State are invited to attend the meetings and luncheon.

Mid-South Postgraduate Medical Assembly

Some 1,200 to 1,400 physicians and medical students from Tennessee and neighboring states attended the Mid-South Postgraduate Medical Assembly, February 14-17, at the Peabody Hotel in Memphis. The papers dealt with the latest developments and progress in various medical and surgical fields. Subjects discussed were hearing problems in children, the present status of cancer research, current approach to rheumatic fever, causes of juvenile delinquency and intestinal obstruction.

Physicians who participated in the four-day program were Dr. Edward Allen of Chicago; Dr. Harry Bakwin of New York; Dr. William H. Pickel of Rochester, Minn.; Dr. Alson E. Braley of Iowa City; Dr. William M. Coppridge of Durham, N. C.; Dr. T. S. Danowski of Pittsburgh; Dr. B. Y. Glassberg of St. Louis; Dr. Frank Glenn of New York; and Dr. Arthur Grollman of Dallas; Dr. William P. Nicholson, Jr., Atlanta; Dr. Rudolph J. Noer of Louisville; Dr. Kenneth L. Pickrell of Durham, N. C.; Dr. C. P. Rhoads of New York; Dr. George L. Sackett of Cleveland; Dr. Henry G. Schwartz of St. Louis; Dr. Albert Segaloff of New Orleans; Dr. John C. Ullery of Columbus, Ohio; Dr. David E. S. Wishart of Toronto, Canada; and Dr. Warren E. Wheeler of Columbus, Ohio.

Memphis Eye, Ear, Nose and Throat Convention

The Convention was held on February 11-13. The speakers included Dr. D. E. Staunton Wishart, Department of Otolaryngology, University of Toronto; Dr. Alden H. Miller, Department of Otolaryngology, University of Southern California; Harvey E. Thorpe, Ophthalmologist-in-chief, Montefiore Hospital, Pittsburgh; Georgiana Dvork-Theobald, Consulting ophthalmologist, University of Illinois; Edmund P. Fowler, Jr., Department of Otolaryngology, Columbia University; and Alson E. Braley, Department of Ophthalmology, University of Iowa. More than 100 physicians were in attendance.

Scott County Hospital

One of the most modern hospitals of its kind was dedicated on January 15 at Oneida. The facility costs $520,000. Dr. H. M. Leeds and Dr. M. F. Frazier, Oneida physicians, were two leaders in the project and are members of the original building committee.

University of Tennessee College of Medicine

The University of Tennessee College of Medicine with 804 students is the largest in the United States, according to figures compiled by the Council on Medical Education and Hospitals of the American Medical Association. The figures are for the academic year 1954-55. The data also revealed that the University of Tennessee leads in the number of graduates in medicine. The college graduated 188 physicians during 1955.

★

On January 1st, the Shelby County Tuberculosis Association established funds for a diabetes case finding research clinic. The project will be under the supervision of the Division of Preventive Medicine of the University of Tennessee Medical School and is located in the out-patient department of John Gaston Hospital. The program has been approved by the Memphis-Shelby County Medical Society.

★

The Division of Obstetrics and Gynecology has been awarded a grant of $28,994 by

the U. S. Public Health Service in support of a continuation of a part of the program of the Memphis Cancer Survey Project, which has been in operation for the past three years and is concerned with the detection of early uterine cancer by the vaginal smear method.

★

Dr. Francis Murphey has been promoted to professor of neurological surgery, replacing Dr. R. Eustace Semmes, who asked to be relieved of his administrative duties effective December 31.

Advanced from assistant professors to associate professors in the Department of Urological Surgery were Dr. John L. Shaw, Dr. Raymond Mayer and Dr. A. Lynn Herring. Dr. M. J. Roach and Dr. James M. Brockman were promoted from assistant professor to associate professor in the Division of Obstetrics and Gynecology. Dr. William W. Watkins and Dr. William H. Walker were promoted from assistant to instructor in Urological Surgery. Dr. Lillie C. Walker was promoted from assistant to instructor in the Divisions of Preventive Medicine and Pediatrics. Dr. James S. Haimsohn has been appointed an instructor in the Division of Medicine.

★

A Postgraduate Course in Clinical Hematology is scheduled for February 28, 29 and March 1 and 2. Another course on Diagnosis and Management of Peripheral Vascular Disease will be given on March 7 and 8.

PERSONAL NEWS

Dr. H. H. Shoulders, Nashville, former president of the American Medical Association, has retired after 45 years of practice to devote his time to compiling papers prepared during his career and travel.

Dr. Morton J. Tendler, Memphis, General Surgeon, has been promoted from Captain to Rear Admiral in the Naval Reserve. Dr. Tendler was one of three Medical Corps officers in the U. S. picked for promotion from Captain.

The new officers of the Memphis Thoracic Society are the following Memphis physicians: **Dr. Duane M. Carr, President; Dr. Franklin H. Alley, Vice-President; and Michael M. Marolla, Secretary-Treasurer.**

Drs. Robert Pettus, Jr., and **O. W. Ramsay** have announced the opening of their offices for the practice of medicine in Madison.

Dr. James T. Ladd has opened his office for the practice of medicine in Portland.

Dr. J. S. Johnson announces the opening of his office for the practice of medicine in Gainesboro.

Dr. E. B. Smith, Knoxville, has returned from two years in the service and announces the opening of his office for general practice.

The Jesse Holman Jones Hospital is nearing completion in Springfield and the following physicians have been elected:—**Dr. J. E. Wilkison,** President of the Staff; **Dr. Robert DeBerry,** Vice-President; and **Dr. John S. Freeman,** Secretary.

The following physicians from Cleveland recently participated in a Cancer Panel Discussion. They were: **Dr. William A. Garrott, Moderator; Dr. W. A. Barton, Dr. Marvin Batchelor, Dr. Charles Heron; Dr. J. C. Lowe, Dr. Joseph McCoin and Dr. Gilbert A. Varnell.**

Dr. Malcolm H. Weathers, Loretto, has returned from service and announces the reopening of his office for the practice of medicine.

Dr. W. T. Harris, Pulaski, has been named to head the March of Dimes Program.

Dr. McCall Morris, Union City, has announced the opening of his office for practice as an eye, ear, nose and throat specialist.

Dr. Thomas Johnson, Dyersburg, recently made the key-note address before the West Tennessee Heart Association Meeting.

Dr. John B. Youmans, Nashville, has been named to head a team of U. S. nutrition and health experts to survey conditions in Iran and Pakistan.

Dr. T. J. Holmes, McKenzie, has been named the President of the Consolidated Medical Assembly of West Tennessee.

Dr. Joseph W. Graves, Chattanooga, has successfully qualified as a diplomate of the American Board of Surgery.

Dr. Clarence Shaw, Chattanooga, appeared on the program "Your Doctor Speaking," a weekly TV feature in Hamilton County.

Dr. Charles Robinson, Lewisburg, is now associated with the Gordon Clinic.

Dr. W. M. Abernathy, Covington, closed his office January 15th to serve a tour of duty with the Army Medical Corps.

Dr. Hubert K. Turley, Memphis, is the new President of the Memphis Urological Society. He succeeds **Dr. Joseph C. Orman.** Other officers are **Dr. William H. Walker,** Vice-President, and **Dr. Fontaine B. Moore,** Secretary-treasurer, all of Memphis.

Elected officers of the Uplands Cumberland Medical Center in Crossville are **Dr. M. M. Young,** Chief of Staff; **Dr. H. F. Lawson,** Vice-Chief of Staff; **Dr. W. E. Evans,** Secretary; **Dr. R. M. Metcalfe,** Chief of Medicine; **Dr. Donathan Ivey,** Chief of Surgery; and **Dr. E. W. Mitchell,** Member at Large of the Medical Board. All are from Crossville.

Dr. Joseph McCoin, Cleveland, has been elected President of the Medical Staff at Bradley Memorial Hospital. Other officers are **Dr. Wesley Barton**, Vice-President, and **Dr. Chalmer Chastain**, Secretary.

Dr. Harold Feinstein, Memphis, is the new chief of Obstetrics and Gynecology Department at St. Joseph's Hospital.

Dr. Aubrey B. Harwell has moved his office for the practice of internal medicine to 108 Louise Avenue, Nashville.

Dr. Edgar W. Branyon, Jr., has joined Doctors McClure, Ivie, Beveridge and Greer in the practice of Radiology in Nashville. The group announces the removal of their radiation therapy to the Medical Arts Building, and also the addition of Cobalt 60 Teletherapy.

BOOK REVIEW

Rypins' Medical Licensure Examinations. By Walter L. Bierring, M.D. Philadelphia, J. B. Lippincott, 1952, Seventh Edition, 809 pages. Price, $8.00.

This is the seventh edition of a very popular review volume whether for general information or in preparation for examinations for medical licensure. Dr. Walter Bierring with his wide background in clinical and preventive medicine, as well as in the field of medical licensure and education, has provided in his editorial supervision a broad coverage of medicine in these last several editions for which he has been responsible. With an editorial review panel of ten outstanding educators in their respective fields, there are offered factual and trustworthy topical summaries and questions based upon these. The candidate for whatever type of examination will get from the several sections not only clues with regard to questions which might be asked, but also the approach in answering these questions.

R. H. K.

ANNOUNCEMENTS

Hale-McMillan Lecture

Dr. Owen H. Wangensteen, Chief of the Department and Professor of Surgery at the University of Minnesota, will deliver the Hale-McMillan Lecture at 8:00 P.M. on Thursday, March 8, 1956, in the Public Health Lecture Hall of Meharry Medical College in Nashville. His subject will be "The Surgical Aspects of the Peptic Ulcer Problem."

Regional Meeting of the American College of Gastroenterology

The southern regional meeting of the American College of Gastroenterology will be held in New Orleans, Sunday, April 8.

Members of the medical profession are cordially invited to attend. A copy of the program may be obtained from the Secretary, The American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

Clinical Conference—Chicago Medical Society

The conference will be conducted in the Palmer House, Chicago, on February 28-March 2. The conference is designed to help both general practitioner and specialist, and will present lectures, panel discussions, teaching demonstrations and question and answer periods.

District VII Meeting of the American Academy of Obstetrics and Gynecology

The Fourth Annual Interim meeting of District VII of The American Academy of Obstetrics and Gynecology will be held at the Peabody Hotel in Memphis on March 9-10. The two day program will consist of 11 scientific papers by Fellows, 6 unusual case reports, 9 short papers by residents and 16 luncheon round tables. The Academy Banquet with entertainment to follow will be held on Friday evening, March 9th. Wives are invited.

American Goiter Association

The American Goiter Association will hold its regular meeting at the Drake Hotel, Chicago, May 3, 4, and 5. The programs for the three day meeting will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland.

Gill Memorial Hospital Spring Congress

The 29th Annual Spring Congress of the Gill Memorial Eye, Ear, Nose and Throat Hospital will be conducted April 2 through April 7 at Roanoke, Virginia. The annual spring congress is in ophthalmology and otolaryngology and allied specialties.

American College of Allergists

The College will conduct its Graduate Instructional Course and the Twelfth Annual Meeting in the Hotel New Yorker, New York City, April 15 through April 20.

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So much in the outcome of major surgery hinges on the preoperative evaluation of the patient and decisions based on this that such an evaluation cannot be slighted.

PREOPERATIVE EVALUATION OF THE SURGICAL PATIENT*

EDWARD T. NEWELL, JR., M.D., Chattanooga, Tenn.

Evaluation of a patient preoperatively both for elective and emergency surgery is an important subject. It becomes so routine and commonplace to most of us that at times we become careless or forgetful of previous experience and training.

To illustrate the importance of preoperative evaluation, I should like to recite the experience of a board surgeon accustomed to traumatic surgery and a physician-anesthesiologist who lost a patient by lack of preoperative evaluation. Both misjudged the condition of an acute alcoholic patient. The surgeon was called to see a victim of an automobile accident in an emergency room. The resident had already examined the patient and instituted shock treatment. The patient's principal injury was a painful fracture-dislocation of the right hip. Neither the surgeon nor the anesthesiologist recognized the acute dilatation of the stomach in this case. The result was persistent vomiting and tracheal aspiration of the most tenacious stomach contents which endotracheal suction and many other heroic measures would not help. All suction apparatus immediately became clogged. As you may have surmised, I was the unfortunate surgeon. In hindsight, the use of a large stomach tube preoperatively, which had often been used before, probably would have saved this patient. Likewise endotracheal intubation before vomiting started might have prevented aspiration into the bronchial tree. Perhaps even better judgment would have been to delay definitive treatment from 2 a.m. until later in the morning. Pain could have been relieved by temporary skin traction on the extremity.

In general there are five fundamental questions we should ask ourselves either consciously or subconsciously before operating on a patient.

1. What is the circulatory status?
2. What is the pulmonary status?
3. What is the renal status?
4. What is the nutritional status?
5. What is the mental status?

A careful history and physical examination can usually give the answer to the above five questions without relying on extensive laboratory studies.

The Circulatory Status

Let's consider the circulatory status first. Adequate evaluation of the patient can usually be obtained by questions directed to his cardiac reserve. Of course, the value of a medical consultant and the electrocardiographic findings are important in ruling out myocardial damage. Most cardiac patients, however, tolerate surgery well if their cardiac condition is kept in mind by the anesthesiologist and the surgeon. Hypertension itself is rarely a contraindication to surgery. Yet carelessness in permitting the blood pressure to drop too rapidly and too low in a hypertensive patient with arteriosclerotic heart disease can bring on an unrecognized coronary occlusion while under an anesthetic. Likewise the average arrhythmia is not serious unless myocardial damage is present.

If patients with heart disease can walk several blocks or climb stairs without precordial pain and exertional dyspnea, they

*Read before the meeting of the Tennessee State Medical Association, April 11, 1955, Chattanooga, Tenn.

usually tolerate surgery well. Patients with mild congestive heart failure will tolerate surgery if properly prepared. These patients should be digitalized, and the signs of failure improved before surgery. Those patients with serious congestive heart failure and recent coronary occlusion with myocardial damage should have surgery deferred if at all possible.

Postoperatively, the surgeon must remember not to increase suddenly the blood circulatory volume by intravenous fluids since the diseased heart cannot adjust to an increased fluid volume as easily as the normal heart.

The Pulmonary Status

Evaluation of the pulmonary status is necessary in deciding upon the type of anesthesia, the best combinations of anesthetics, the need of endotracheal intubation during surgery, and other points. It goes without saying that in any elective procedure operation should be postponed if the patient has any evidence of acute infection of the respiratory tract. In chronic respiratory diseases preoperative diagnosis is important so that precautions can be taken in advance. Again by a few simple questions in the history one can usually become aware of these dangers. Questions which lead to: How much a patient smokes? How much productive morning cough and nasal congestion is present? Is he or she an asthmatic? Any severe allergy? These are the patients who are prone to develop postoperative atelectasis, bronchitis and pneumonitis. In older patients with suspected chronic pulmonary disease a preoperative chest film is often helpful. Patients with chronic bronchiectasis, arrested tuberculosis, silicosis, and pulmonary fibrosis will usually tolerate surgery; but more careful attention to high oxygen content under anesthesia and prevention of postoperative pulmonary complications is necessary. It is my opinion that the "so-called" cardiac arrest is more often due to prolonged anoxia than to any other cause.

The Renal Status

The renal status can usually be rapidly ascertained by a complete urinalysis; of course the specific gravity as well as the presence of albumin, sugar and the microscopic findings should be noted. If the history also reveals symptoms of bladder neck obstruction of long standing, one should evaluate the renal function more carefully before surgery. Such studies should probably include a fasting blood urea or nonprotein nitrogen determination along with an intravenous pyelogram, which is an excellent test of kidney function as well as visualizing the genitourinary tract.

In general, one should defer surgery in all acute nephritic conditions, such as acute glomerular nephritis or lower nephron nephrosis. In chronic renal conditions surgery need not be deferred provided satisfactory renal output is maintained postoperatively along with proper electrolyte balance.

Perhaps a word should be said concerning diabetes. The better the control of the diabetic the easier the surgery will be tolerated. Some diabetics with severe infection cannot be controlled until operation with drainage has been done. When fluids are given to diabetics, it is well to remember that it takes about 15 units of insulin to cover the sugar in a 1,000 cc. solution of 5 percent glucose (15 units for 50 Gm.). An easy postoperative regimen for all but the very severe diabetics is to examine the urine every four hours for sugar and acetone. An indwelling catheter is often helpful. In general 15 units of regular insulin is given if the reaction is *red;* ten units if *yellow;* five units if *yellow-green.*

The Nutritional Status

The preoperative evaluation of the nutritional status is usually quite obvious from the physical examination if the state of dehydration, anemia, weight loss, and nutritional edema, are kept in mind.

The proper nutritional balance is most important, and time should be taken to correct this condition prior to all elective surgery. A positive nitrogen balance is absolutely essential for repair and growth of tissue. Negative nitrogen balance should be suspected especially where there is excessive or persistent loss of body fluids containing protein such as in severe burns, chronic biliary, pancreatitic, and intestinal fistulas, pyloric obstruction, and protein

loss by the bowel in ulcerative colitis. In recent years the internist has taught us that the nutritional loss (mainly protein) from repeated paracentesis in cases of cirrhosis of the liver is such that this procedure should seldom, if ever, be done.

Complete restoration of nutritional balance is not always possible before operation due to the time element. However, the following things can be corrected either by mouth, by parenteral fluids or blood transfusions.

1. Adequate hydration (determined by urinary output, texture of the skin, etc.)
2. Correction of anemia (to 60 percent or 8 to 9 Gm. hemoglobin)
3. Correction of electrolyte imbalance
4. Improvement of caloric deficiency
5. Correction of vitamin deficiency

The Mental Status

Finally, when evaluating a patient for operation, we should never lose sight of the mental status. In emergency surgery the mental status is often an important problem; this is due to the large number of head injuries. Each year there are nearly 38,000 deaths due to automobile accidents. Approximately 75 percent of these deaths are due to head injury, 15 percent to chest injuries, 5 percent to abdominal injuries, and 5 percent for other injuries. It is a good policy to defer all definitive surgery in semiconscious and unconscious patients whether due to injury, alcohol or what not. My personal illustration at the beginning of this paper of not deferring definitive treatment emphasizes this important fact.

Preoperative evaluation of psychoneurotic patients is most important; not so much as to how they will tolerate surgery physically, but in deciding how necessary surgery may be in these cases. Conservatism and experience is the best teacher in handling psychoneurotic patients. In cases of major psychosis only emergency life saving surgery should be attempted.

Summary

In conclusion, I should like to reiterate as follows: If care and time are taken to obtain a good history and perform a complete physical examination, the surgeon will have in most cases an excellent evaluation of how well his patient will tolerate surgery. A complete blood count and urinalysis is essential; chest X-ray films are desirable. Other laboratory procedures and consultations are indicated when the above procedures suggest specific problems which need investigation and correction prior to surgery. Age has not been mentioned in the preoperative evaluation per se but, of course, must be taken into consideration. Ordinarily any patient between the ages of one and eighty will tolerate surgery if the circulatory, pulmonary, renal, nutritional and mental state are properly evaluated and intelligently handled preoperatively, during surgery, and postoperatively.

The Fanconi Syndrome. Saville, Paul D., Nassim, R., Stevenson, F. Harwood, Lilly Mulligan and Margaret Carey. Bone & Joint Surg., 37-B, 1955.

The association of rickets or osteomalacia with a variety of renal tubular defects has been classified by Dent (1952) into six main types. The Fanconi syndrome (Dent Type 4) characterized by rickets or osteomalacia, with an associated deficiency of tubular reabsorption of phosphate, glucose, certain amino acids and sometimes of water and potassium. The kidneys are unable to maintain acid-base balance, causing a chronic acidosis and loss of calcium, as well as a chronic hypophosphotemia. Very thorough metabolic studies were carried out on two patients with the results that oral sodium bicarbinate alone was found to correct the acidosis and decrease the loss of calcium in the urine. Calciferol in high dosage increases intestinal absorption of calcium and phosphorus but the urine calcium excretion then increases and vitamin D alone does not, therefore, give a positive balance adequate for complete healing of the bony lesions. It was found, however, that alkalies in the form of sodium bicarbinate or sodium and potassium bicarbonate, with the addition of Calciferol, put these patients into strongly positive calcium and phosphorus balance and promoted healing of rickets, osteomalacia and pseudo fractures. The use of sodium and potassium bicarbonate is recommended because alkali therapy may lower the serum potassium and even precipitate symptoms of hypokalaemia in potassium-losing patients. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

In spite of improvements in postoperative care in the recent past, complications still arise to plague the surgeon at times. Watchful postoperative care continues to be as essential now as it has been in the past.

POSTOPERATIVE COMPLICATIONS*

JAMES A. KIRTLEY, JR., M.D.,† Nashville, Tenn.

Many fatal and dreaded postoperative complications have disappeared in the past fifteen years. This is due to a better understanding of fluid balance, blood replacement, anesthesia, and effective antibiotics. The incidence of postoperative complications, as well as mortality rate, can be decreased directly with the care used in preoperative preparation, properly administered anesthesia and careful surgery without technical errors.

Despite every effort, there will still be complications after operation and their early detection and prompt treatment may save lives as well as hospital days. Since only a few of the more common complications can be briefly mentioned here, the reader desiring a more detailed discussion is referred to "Principles of Surgical Care" by Dr. Alfred Blalock.[1]

Wound Complications

Although hemorrhage after operation is embarrassing to the surgeon there should be no delay in correcting continuing bleeding. The increasing use of recovery rooms makes early detection of bleeding more certain. Bleeding following operation on the neck may require a tracheotomy to maintain an airway.

While the antibiotics have reduced the number of wound infections they often mask their detection and thus delay indicated drainage. We feel that it is wiser to discontinue antibiotics when the patient begins to "spike" fever after seventy-two hours. This is especially true following removal of a gangrenous or perforated appendix.

Wound disruption is usually dependent on cough, distension or infection, but inadequate wound healing may be associated with hypoproteinemia or anemia. Frequent serum protein levels should be determined and levels below 5 Gm. per 100 cc. indicate that adequate amounts of serum albumin should be given.

Partial wound dehiscence may often be treated by approximating the skin edges with strips of adhesive tape. Conservative measures are not acceptable when loops of bowel are present in the wound. Our preference is to close the wound with heavy interrupted sutures which pass through all layers of the abdominal wall. One must be careful not to allow a loop of the bowel to be caught in the wound. It is surprising that many of these secondary closures heal without any later defect in the abdominal wall despite the absence of approximationly layers.

Pulmonary Complications

Atelectasis is the most common postoperative pulmonary complication and should be suspected when there is a sudden rise of temperature within the first thirty-six hours after operation. The diagnosis is easily made and the patient should be encouraged to clear his bronchial tree by forced coughing. Actually pounding on the back seems to help. Bronchoscopy is definitely indicated in patients having massive atelectasis.

Bronchopneumonia is rarely encountered and, like lobar pneumonia, can usually be controlled by antibiotics.

Pulmonary embolism is still a dreaded postoperative complication and its incidence has apparently not been decreased by early ambulation or prophylactic ligation of the superficial femoral veins. Since embolism is just as frequent in bed patients not operated upon, leg exercises and proper positioning in bed are important. This will be further discussed under venous thrombosis.

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*Read before the meeting of the Tennessee State Medical Association, April 11, 1955, Chattanooga, Tenn.

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Abdominal Complications

Acute dilatation of the stomach is often manifested by a shock-like state characterized by sweating, tachycardia, pallor, dyspnea, hypotension and abdominal fullness. It is dramatically relieved by a Levine tube.

The distinction between "paralytic ileus" and early mechanical intestinal obstruction may be quite difficult and yet most important. Frequent adequate periods of auscultation of the abdomen are helpful along with abdominal roentgenograms. The use of a Kantor or Miller-Abbot tube is indicated in the former condition but may dangerously mask vascular changes in mechanical obstruction. One should remember that trauma to the abdomen or back may be followed by mesenteric thrombosis which can be corrected by operation.

Intraperitoneal infection is less frequently seen since antibiotics have been available but still occurs and demands repeated rectal and abdominal examinations and roentgenograms of the diaphragm.

Fecal impaction may be an embarrassing complication in the older patient and is not always confined to the rectum. We were puzzled by a recent case in which a young man had a subtotal gastrectomy following a week of observation for bleeding from a duodenal ulcer. He received morphine at regular intervals for several days. About two weeks after operation he complained of rather severe pain in the right side of his abdomen and was seen at his home. A tender fullness in the mid-ascending colon was palpable but disappeared within a few hours. Despite enemata and laxatives abdominal cramping with alternate diarrhea and constipation continued. Barium enema following readmission to the hospital showed a constant defect just proximal to the splenic flexure. (Figure 1.) The exact nature of this lesion was not know until the patient rather painfully delivered himself of a large, spiked ball of inspisated feces that probably formed in the cecum.

Miscellaneous Complications

Urinary complications are usually easily detected and controlled with the exception of some surgical injuries to the ureters or bladder. "Renal shut down" requires careful regulation of fluids.



FIGURE 1.

Adrenal failure may be an unsuspected complication and since there are no adequate preoperative tests the condition may not be suspected until severe hypotension exists.

Care must be exercised in the use of *intravenous vasoconstrictors* since actual necrosis of large areas of skin on the legs has been noted when the infusion is given in the saphenous vein at the ankle. The solution should not be too concentrated and a second infusion can be started if indicated.

Venous thrombosis remains a controversial complication. The present trend of therapy is to treat phlebothrombosis or thrombophlebitis with bed rest, elevation of the extremities, and anticoagulants in case of the former. We do not feel that all patients with acute thrombophlebitis require anticoagulant therapy. The use of intramuscular trypsin seems to hasten the subsidence of the inflammatory process although rest with elevation of the feet and heart are more important.

The "sixty-four dollar question" regards the patient with one or more pulmonary emboli. We feel that there are certain valid indications for ligation of the inferior vena cava as brought out in a recent study of 34 patients in Nashville.[2] Probably 85 percent of patients with venous thrombosis can be treated with rest and anticoagulants.

Acute parotitis is a rather rare complication today because of adequate hydration, antibiotis, and other measures. Attention

to mouth hygiene, use of chewing gum and drainage if actual suppuration occurs is indicated in critically ill patient.

Singultus remains as a frequent and often distressing postoperative complication, the treatment of which is legion. Thorazine seems to be more effective than most of the time honored measures.

"Cures" suggested by two patients from entirely different economic levels point up the problem of hiccoughs. After all known measures, including Thorazine, had failed to check hiccoughs in a middle-aged executive following cholecystectomy, the patient "cured" himself in two days with frequent sips of champagne (American). The wife of a debilitated farmer from up in the hills requested that she be allowed to use her method of stopping her husband's hiccoughs, since everything short of bilateral phrenicotomy had failed. Her method was almost immediately successful; she cut an Irish potato half in two and carefully placed one half over his umbilicus!

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Acute Pulmonary Edema Pathology, Physiology and Clinical Management. Lusiada, A. A., and Cardi, L. Circulation 13:113, 1956.

This is an excellent review of the many problems of acute pulmonary edema. Earlier concepts that acute pulmonary edema is a terminal or agonal phenomenon are no longer tenable. The frequency of occurrence of pulmonary edema in other than cardiac conditions is emphasized. The mechanism of production of pulmonary edema has been explained in different ways. Three main factors seem of importance: high pressure in the pulmonary capillaries, increased permeability of these capillaries, and decreased osmotic pressure of the blood. Attempts to explain all causes of pulmonary edema by one theory are not feasible.

Division of the several clinical types of pulmonary edema is important since therapy for the various types may be quite different. Duration of the clinical episode allows division into, (1) fulminating, (2) acute and (3) protracted. Other clinical features permit classification as: Group I, that associated with a full pulse, a high blood pressure and high cardiac output; and Group II, that associated with severe blood pressure drop, low cardiac output and tendency toward shock. There is an excellent discussion of the pharmacologic and physical methods used in the management of pulmonary edema. Many of the drugs and physical methods conventionally used tend to decrease venous return and cardiac output, and while helpful in patients of Group 1, they may induce shock in patients of Group 2. Special aspects of the treatment of pulmonary edema in mitral stenosis, in massive myocardial infarction and in exposure to toxic gases are discussed. Digitalization may be harmful in the treatment of these special cases but may be helpful in the prevention of attacks.

Clinical case reports illustrating the use of antifoaming agents emphasize the importance of this purely symptomatic treatment. It is the author's viewpoint that all cases should be immediately treated with an antifoaming agent, as the first remedy. In cases of pulmonary edema due to inhalation of toxic gases, silicone aerosal may prove to be the agent of choice.

Much of the factual information in this article does not lend itself to review but should be closely studied by those dealing with this ever increasing problem. (Abstracted for the Middle Tennessee Heart Association by J. J. Calloway, M.D., Nashville, Tenn.)

Because of a greater use of the electrocardiograph in routine examinations, an increasing number of patients are being labelled as suffering from heart disease on the basis of abnormalities in the tracing without clinical evidence of disease. Few diagnoses are more conducive to anxiety states than that of cardiac diseases.

BENIGN OR FUNCTIONAL RIGHT BUNDLE BRANCH BLOCK

I. RALPH GOLDMAN, M.D., Memphis, Tenn.

Introduction

The electrocardiographic picture of right bundle branch block is frequently seen in patients having no demonstrable organic heart disease. Yet all too often such an electrocradiographic diagnosis implies serious heart disease and a poor prognosis to the average practitioner, resulting in needless iatrogenic heart disease. Too many patients, having no evident heart disease, have thus been advised to retire or seek less demanding work with its resulting economic and psychologic consequences. The purpose of this paper is to attempt to prevent such an outcome, and it is suggested that right bundle branch block without evidence of organic heart disease should be termed "Functional or Benign Right Bundle Branch Block" in contradistinction to "Organic Right Bundle Branch Block" resulting from organic heart disease. Complete case studies are submitted to support such a thesis.

Case Studies

Case 1. (L. W.) The patient was a 41 year old, white male professional wrestler who entered with a vague abdominal complaint. The cardiovascular history was entirely negative. The Past Medical History, Social History and Family History were noncontributory.

Physical examination revealed only impaired vision of the left eye due to retinal detachment, and a cauliflower ear. A complete examination of the cardiovascular system was entirely normal.

A routine electrocardiogram showed a classical right bundle branch block. However, fluoroscopy of the heart in the postero-anterior, right and left anterior oblique positions was entirely normal. A ballistocardiogram was also within normal limits. A gastrointestinal survey revealed only two small diverticuli of the transverse colon. All other laboratory studies were negative.

The patient was informed of his electrocardiographic finding. He was also told that he had no evident heart disease and was advised to lead a normal life. This he has continued to do for almost three years with no cardiovascular symptoms although he has continued with his active profession as a wrestling promoter.

Case 2. (H. B.) This patient, a 46 year old business man, entered for a cardiac checkup on the same day as the patient in Case 1. A routine electrocardiogram taken by his family physician several weeks previously had been diagnosed by a cardiologist as showing right bundle branch block. He was informed that he had serious heart disease and would have to retire. He was consequently arranging to dispose of his business. His cardiovascular history on entry revealed only palpitation with excitement or stress. The remainder of his history by systems, Past Medical History, Social History and Family History were noncontributory.

Complete physical examination was negative except for mild prostatic hyperthophy. Complete laboratory studies were negative except for an electrocardiogram showing right bundle branch block which was identical to that of Case 1 in appearance. The ballistocardiogram and fluoroscopy in postero-anterior and right and left anterior oblique positions was normal.

The patient was informed that right bundle branch block occurs in patients having no demonstrable heart disease, and he was advised to live a normal life. He has continued to do this, including managing his active business without developing any cardiovascular symptoms or abnormal findings.

Case 3. (W. K.) The patient, a 54 year old chiropodist, had first been seen by a physician six years previously because of mild chest pains. These had no relationship to emotion or effort. A routine electrocardiogram was taken, and the patient was informed that he had serious heart disease caused by coronary arteriosclerosis with myocardial infarction. He was treated as such and allowed to return to his practice with marked limitations. He was first seen in 1952 when he entered requesting a cardiac checkup. The only cardiac symptom was a continuation of his chest pains which radiated from the back anteriorly following the course of the ribs.

A complete physical examination was negative except for intercostal neuritis and marked splitting of the second pulmonic heart sound.

All laboratory studies including cardiofluoroscopy and a ballistocardiogram were normal other than for the electrocardiogram which showed right bundle branch block. A double Masters' Test was negative.

The patient was informed that he had no abnormal findings other than a right bundle branch block, and that this condition was often present in apparently normal hearts. He was advised to resume a normal life and has actively practiced chiropody with no further difficulties or symptoms. Periodic checkups have shown no changes in his condition.

Discussion

Although the literature contains several papers pointing out that right bundle branch block can occur in apparently normal individuals, this fact is not widely known. This is probably due to the fact that these papers have appeared in specialized journals intended primarily for internists and particularly cardiologists.

Two recent papers[3, 4] have completely covered the literature of bundle branch block occurring in patients free of demonstrable organic heart disease. Wolfram[4] in his series, studied 35 cases of right bundle branch block occurring in veterans. In studying these cases he set up definite criteria for the diagnosis of heart disease. These were: (1) an adequate history of the anginal syndrome; (2) a history of myocardial infarction; (3) a history of significant dyspnea in the absence of pulmonary disease, if supported by any physical signs suggestive of cardiac disease; (4) enlargement of the heart or signs indicative of, (5) valvular or (6) congenital cardiac disease. Of his series, 26 cases were free of apparent heart disease (74 percent). Wolfram also studied 17 cases of left bundle branch block of which 41 percent exhibited no organic heart disease. Four of his patients, free of demonstrable organic heart disease, developed deeply rooted psychic disturbances which were due to their knowledge of the presence of bundle branch block and to the interpretation placed upon this finding by their physicians. Wolfram concludes "These cardiac neuroses were precipitated by improper clinical evaluation and need not have occurred. Disease of the heart should not be diagnosed, whether bundle branch block be present or not, except with the criteria used in this study and in the presence of certain metabolic disorders and deficiency states."

Vasifdar and Levine[3] in 1952 reported 27 cases of right bundle branch block occurring in patients apparently free of organic heart disease. Each of these patients had been followed from 5 to 29 years with an average follow-up of 11.9 years. They also reported several cases of left bundle branch block in which no organic heart disease was found. These authors conclude that the physician should make light of this condition, bundle branch block free of demonstrable organic heart disease, and permit such patients to carry on normal duties. They also suggest that the term "Benign Bundle Branch Block" be used in these cases.

Durham and McGee,[1] in taking routine electrocardiograms on industrial workers, found that only 2 out of 20 workers with right bundle branch block had symptoms or signs which could possibly be related to that abnormality.

Two of the three patients presented in this series had a cardiac neurosis. One had been advised to dispose of his business and the other to restrict his practice of chiropody solely on the basis of an electrocardiographic diagnosis of right bundle branch block. Both are living normal lives at this time with no cardiovascular complaints or signs of organic heart disease. The third patient, a professional wrestler and promoter, has practiced his profession with no difficulties. It is interesting that all three patients had normal ballistocardiograms. This finding should be investigated further. Vectocardiography can assist in this problem by differentiating block from hypertrophy.[2]

The cardiologist interpreting electrocardiographic tracings is going to see more and more bundle branch block as a result of the increased use of the electrocardiogram in routine checkups. In reporting bundle branch block, particularly of the right bundle, he should point out that such a block can occur in the absence of demonstrable heart disease.

In the presence of an electrocardiographic diagnosis of bundle branch block, the patient should have the benefit of a thorough cardiovascular survey. If this is normal, the patient should be carefully instructed as to the benign status of his condition. However, he should be further advised to have periodic cardiac checkups.

Bundle branch block, particularly of the right bundle, occurring in the absence of

demonstrable organic heart disease should be termed "Benign or Functional Bundle Branch Block."

Summary and Conclusions

1. Three cases of right bundle branch block occurring in patients having no demonstrable heart disease have been presented.

2. It is recommended that bundle branch block, particularly of the right bundle, occurring in the absence of demonstrable heart disease be termed "Benign or Functional Bundle Branch Block."

3. Patients exhibiting functional or benign bundle branch block must be advised that this condition is benign, but that he should have periodic cardiac checkups.

4. If this procedure is followed, much needless iatrogenic heart disease can be prevented.

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The Cysts of Osteoarthritis of the Hip. A Radiological and Pathological Study. K. Rhaney, Dundee, and Lamb, D. W. Bone & Joint Surg., 37-B:663, 1955.

Bone cysts are seen frequently at both the femoral head and in the acetabulum in advanced osteoarthritis. Landells (1953) suggested that these cysts were caused by the intrusion of synovial fluid through the fissured cartilage and that the cancellous trabeculae yield under the pressure transmitted through the fluid, ultimately giving rise to the cysts. These authors present radiographic and pathologic studies which they feel establishes these lesions as foci of bone necrosis caused by violent impact between the opposing surfaces of the joint in the absence of healthy articular cartilage. These authors believe that bone destruction precedes the entrance of synovial fluid and suggest that the cavities filled with fluid are formed in the course of repair as the dead bone is removed. This opinion is supported by the fact that synovial fluid is not always present at the site of recent injury even when the surface bone is disrupted, and fluid is absent from sites of bone necrosis when the continuity of the surface is not destroyed. They feel that bone destruction precedes and is independent of the entrance of synovial fluid into the bone and that if the surface remains intact until the deranged surface is filled with granulation tissue, the formation of cavities of synovial fluids will not occur. If synovial fluid enters the necrotic bone, it is likely to disrupt the already devitalized tissue which may then be swept into the joint proper, leaving a potential space in which synovial fluid becomes encysted during the stage of repair. The site of fracture and necrosis may become visible radiologically once devitalized fragments of bone have been removed, either by osteoclastic activity or by being shed into the cavity of the joint. Imperfect healing, the authors believe, is caused by lack of rest and continued use of an injured osteoarthritic hip will result in repeated transmission of the body weight through the defect in the trabecular system so that healing is impaired and the cavities of synovial fluid will tend to persist instead of being obliterated by granulation tissue. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

STAFF CONFERENCE

Vanderbilt University Hospital*

Cerebral Buerger's Disease

DR. STEPHEN SCHILLIG: This 34 year old attorney was admitted to the Vanderbilt University Hospital on January 23rd, 1956, complaining of weakness of the left arm and leg of 10 days duration.

Ten days prior to admission he experienced the abrupt onset of transient tingling of the left lower extremity. Within the next few hours there was progressive weakness and incoordination of the left leg so that walking became quite difficult. He did not become aware of any weakness of his left upper extremity until the following morning when he noticed that he was unable to grasp things very well with his left hand. He was admitted to another hospital within 24 hours of the onset of this illness and during the subsequent week improved slowly but progressively. At no time was there any alteration of consciousness. There was no visual disturbance or headache. No history of hypertension was elicited.

On reviewing his past history it seemed relevant that he was smoking 1½ to 2 packages of cigarettes per day during the preceding several months and prior to that time had been smoking at least one package of cigarettes daily for many years. He also recalled that during the previous three or four months he noted occasional coldness of his left foot. There was no pain nor had there been any change in the appearance of his left foot.

Physical Examination: He was a somewhat obese but alert young man in no distress; blood pressure 120/62, respirations 22, pulse 68 and temperature 98° F. There was an almost imperceptible ironing out of the left nasolabial groove and some widening of the left palpebral fissure but other than this there was no significant facial asymmetry. The peripheral pulsations seemed everywhere normal except for the left posterior tibial artery where the pulsation was diminished as compared with the right. The left foot felt cool when contrasted with the right, and on elevation of the left lower extremity for several minutes the toes and the sole of that foot appeared significantly paler than similar parts on the right. Examination of the heart, lungs and abdomen was not remarkable.

On neurological examination his gait was obviously abnormal. The left lower extremity was circumducted at the hip and the toe was dragged as he walked. The left arm swing was considerably diminished. Walking on his toes exaggerated this deficit. He was unable to walk on the left heel. The deep reflexes were generally increased on the left whereas the left superficial abdominal reflexes were diminished. The plantar reflex on the left was abnormal. Except for a mild left central type of facial weakness, examination of the cranial nerves was not remarkable. There was no constriction of the visual fields when tested by confrontation. The pupils and extra ocular movements were entirely normal. Ophthalmoscopic examination was not remarkable. There was no asteriognosis or any other sensory deficit.

Diagnosis: In view of the evidence for peripheral vascular disease involving the left lower extremity, a presumptive diagnosis was made of Thromboangiitis obliterans with peripheral and cerebral involvement. It was presumed that he had had a partial thrombosis of the right middle cerebral artery superimposed upon an obliterating angiitis of that vessel.

Laboratory Findings: Routine studies of the blood and urine were normal. X-ray examination of the skull was not remarkable. The pineal gland was calcified and in normal position. An electroencephalogram revealed no significant abnormality. The spinal fluid was clear and under normal pressure with a protein content of 38 mg. per 100 ml. Serologic studies of the blood and cerebrospinal fluid were negative. A fasting blood sugar was 88 mg. per cent, and the NPN was 28 mg. per cent. Oscillometric studies revealed diminished arterial pulsations of the left leg. An electrocardiogram at rest and another electrocardiogram performed in association with a Master's 2-step test were both negative.

Course: On the evening following admission he experienced malaise and mild headache although there were no respiratory symptoms, and his temperature rose to 102.6°. At that time an X-ray examination of the chest revealed a patchy bronchopneumonia involving the left lower lobe and his white blood cell count was 22,800. Cultures of the throat revealed a heavy growth of pneumococci, and these organisms were also found on blood culture. He was treated promptly with aqueous and procaine penicillin and became afebrile after an interval of four days. His temperature and white blood cell count dropped slowly to normal levels. X-ray examination of the chest three days later revealed almost complete clearing of the infiltration.

DR. BERTRAM E. SPROFKIN: This young man presents a most interesting and unusual problem in neurological medicine. During the past few years Dr. Hubert Blakey and I have been conducting a clinical study on the subject of cerebral vascular accidents in young normotensive adults, and this patient is illustrative of a relatively uncommon etiologic subdivision of our study.

Certainly, when the apoplectic onset of a

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neurologic disorder occurs in a normotensive person under the age of forty, the etiologic diagnosis becomes a matter of more than ordinary interest to the neurologist and internist. The advances which have been made in neurologic diagnosis during the past few decades have rendered a glib diagnosis of multiple sclerosis untenable. Similarly, more accurate procedures in the serodiagnosis of syphilis and the precipitous decline in incidence of this disease are closing another popular diagnostic haven.

In a recent paper on cerebral thrombosis in young adults, Berlin et al.[1] emphasize that although one should search for all possible etiologic factors when confronted with the problem of suddenly developing hemiplegia in a young adult, this investigation often proves fruitless. They present 13 cases of acute cerebrovascular lesions in young adults between the ages of 18 and 34 years. Diagnostic procedures failed to uncover evidence of hemorrhage, emboli, hypertension, neoplasm, diabetes, blood dyscrasias, or vascular anomalies. They point out that thrombosis of cerebral arteries attributable to premature vascular degeneration is also a cause of acute neurologic syndromes in young adults. The authors contrast the general reluctance to accept this etiology for the apoplectic development of focal cerebral signs in young people with the recognition accorded premature vascular disease as the etiologic factor in coronary occlusion in the young.

Although we are inclined to agree generally with the conclusions of Berlin and his associates, the patient we are discussing today like patients with lupus erythematosus, polyarteritis nodosa, dermatomyositis and scleroderma, has developed his cerebral thrombosis secondary to an underlying arteritis. In their review of Buerger's Disease, Hausner and Allen[2] of the Mayo Clinic found 11 cases of cerebral involvement in a group of 500 patients with thromboangiitis obliterans. The most common cerebral symptoms which they encountered were transient hemianopia and transitory, constant, or recurrent hemiplegia. In 3 of their cases the cerebral lesion preceded the symptoms of peripheral vascular disease. These patients often present a neurologic syndrome indistinguishable from that caused by an intracranial neoplasm. Certainly, without some peripheral manifestations of this disease we should have little confirmatory evidence for our diagnosis in this patient. I hope that Dr. Laurence Grossman who has seen this patient in consultation regarding his peripheral vascular disease will comment on this aspect of the illness.

Before concluding my remarks I should like to discuss the problem of the diagnosis of vascular neurosyphilis. Stokes et al.[3] in their text, "Modern Clinical Syphilology," describe the patient with vascular neurosyphilis as one who is "too young for arteriosclerosis" and add that a history of syphilis and a positive serologic test may or may not be present. It is also stated that, "the diagnosis may have to be made by exclusion." Alpers[4] points out that this form of syphilis may be associated with a negative Wassermann reaction of both blood and spinal fluid. In 1937, Howell[5] made the following statement, "In a young adult hemiplegia of sudden onset is more often due to syphilitic thrombosis than to anything else, provided you can exclude embolus, tumor of the brain, and disseminated sclerosis."

On the other hand, Merritt[6] (1955) states that, "A history of previous syphilitis infection or a positive serologic test for syphilis in the blood or even in the cerebrospinal fluid indicates only the presence of syphilis and does not indicate whether syphilis or arteriosclerosis is the etiologic factor."

Without belaboring the issue it is clear that a tremendous decline in the incidence of syphilis, following the introduction of penicillin therapy, has resulted in a departure from the viewpoint of Howell which reflected a majority opinion during the prepenicillin era. It is likely that many incorrect diagnoses of vascular syphilis have been made in the past in young adults with cerebral vascular accidents, particularly when the blood test for syphilis was falsely positive. For it is only during the past several years that the phenomenon of biologic false positivity has been elucidated by means of the treponema immobilization test.

Moore,[7] editorializing on the "Changing Pattern of Syphilis," predicts that the pres-

ent serologic tests will eventually be used not for the detection of syphilis but for the express purpose of recognition of the chronic biologic false positive reactor.

It seems reasonable to suspect that in former years a young adult with an apoplectic neurologic syndrome and a biologic false positive serologic test for syphilis would almost certainly have been diagnosed as an instance of vascular neurosyphilis, even in the absence of a previous history of syphilis. The possibility of such an error becomes especially likely when one considers further that such diseases as infectious mononucleosis, malaria, disseminated lupus erythematosus, viral pneumonia, multiple myeloma, sarcoid and others which may be associated with cerebral vascular accidents in young adults are the very disorders which often lead to a biologic false positive serologic test. It is probable that this reaction is related to a qualitative or quantitative alteration in gamma globulin.

As Kampmeier[5] has stated, "Since the treatment of syphilis should mean the treatment of a disease and not the treatment of a blood test, careful study is required in the absence of overt manifestations of syphilis."

In view of all these considerations it is suggested that at the present time syphilitic endarteritis plays a minor etiologic role with regard to cerebral vascular accidents. Certainly, the simplicity of penicillin treatment should not tempt the physician to arrive prematurely at a decision regarding diagnosis of syphilis.

This patient's bronchopneumonia deserves one comment. His hemiparesis affected his thoracic musculature much more than one sees in the average case so that when one palpates his latissimus dorsi bilaterally as he coughs there seems to be much less contraction on the left. It is postulated that the axial musculature involvement in this case resulted in inadequate ventilation of the left lung and perhaps set the stage for the intercurrent infection. (In 1909 Sir Charles Beevor[9] wrote a memorable article on this subject of trunk muscle involvement in hemiplegia.)

DR. LAURENCE GROSSMAN: This man has an arterial occlusive lesion in the vessels of the left leg. With the Allen test involvement of both the left dorsalis pedis and left posterior tibial arteries was demonstrated. Thus the usual criteria for the diagnosis of thromboangiitis obliterans are fulfilled: male, age range of 25 to 40, heavy tobacco smoker, nondiabetic, normal serum cholesterol, and, on roentgenographic study, absence of arterial calcification. Careful search in this patient did not disclose any occlusive lesion in the arteries of the upper extremities. An additional item of interest in the history revealed that all episodes of paresthesias and coldness in the left foot occurred while in bed at night. His work during the day was sedentary, requiring very little walking and he had not experienced claudication. While in bed at night, the heaviest tobacco consumption occurred; actually he smoked constantly until falling asleep. In view of the evident cerebral vascular disease and the peripheral arterial occlusion, I agree with Drs. Sprofkin and Schillig that thromboangiitis is the likely diagnosis. The relatively young age of the patient excludes cranial arteritis. Also the latter disease only rarely has associated involvement of the arteries of the extremities.

The incidence of cerebral artery involvement in thromboangiitis obliterans is not known. Little is written on the subject. Necropsy studies in large series often do not include examination of the brain.

DR. SAMUEL RIVEN: Is the actual lesion a thrombosis or an inflammatory arteritis?

DR. GROSSMAN: That question cannot be answered with certainty. The usual lesion is an inflammatory panarteritis. There may be an associated superimposed thrombosis. The lesions are segmental. The thrombus rapidly becomes organized with a heavy growth of fibroblasts.

DR. HUGH J. MORGAN: I don't go all the way with Dr. Moore's prediction that the positive Wassermann soon will lose its significance as a diagnostic test for syphilis. For a considerable period in the future, as in the past, a positive complement fixation or flocculation test for syphilis will indicate, in the vast majority of instances, that syphilitic infection has occurred.

Perhaps one should now sound the tocsin

against the assumption that in tests for syphilis *all* conventional serologic positivity is false. Heretofore, we have sounded it to warn that occ*asionally* the positive reaction is false, and I think this remains the correct point of view. Let us hope that Nelson's more specific spirochaetal immobilization test will soon be available for routine clinical use.

I do not agree that in the past we have used meningovascular neurosyphilis as a diagnostic catchall for cerebral vascular accidents occurring in young people who haven't hypertension or other possible causes of thrombosis, hemorrhage, or embolism. Nor has the diagnosis of cerebrospinal syphilis rested in the past solely upon the results of serologic tests. Always, the latter have had to be evaluated clinically. I certainly do not agree that we have been guilty of assuming by exclusion that syphilis is present in the hemiplegic patient in the face of a negative history for syphilis and negative serologic findings. Under such circumstances when we don't know the underlying cause of the hemiplegia we should (and I think we usually do) admit it. Certainly we shouldn't (and I think we usually don't) label it syphilis simply because we can't settle upon another etiologic explanation.

I am sure we do not consider often enough the possibility that thromboangiitis obliterans may cause hemiplegia. Drs. Grossman and Sprofkin have convinced me that our patient has Buerger's Disease affecting the peripheral circulation and I am inclined also to accept their view that it caused the hemiplegia.

DR. R. H. KAMPMEIER: I would like to make a comment concerning the false positive serologic test for syphilis. The interest in, and emphasis on the false positive reaction has led to a very curious attitude in students and house officers. Whereas, in past years we had difficulty in getting the student to think of other possibilities than syphilis in the presence of a positive reaction, we now have the opposite situation, where the younger medical person is willing not to give syphilis a thought when there is a positive reaction. In fact, in the last several months two of our interns were willing to discard a positive test as being probably of a false positive type and give no thought to syphilis. I am sorry that Earle Moore wrote the article in a magazine for lay readers about the false positive reaction some months ago, since I have met with two patients in the medical clinic who have quoted this article to me when I discussed the matter of syphilis in their case. They said, "How do you know it's syphilis?" and quoted Moore to the effect that some patients had been treated for many, many years and did not have syphilis. Patients will grasp at straws to avoid this diagnosis. In past years it was difficult to convince patients at times they did not have syphilis when their blood test was positive, and they would demand treatment. Admitting that the serologic test is becoming more of a screening procedure, it is certainly true that in this hospital syphilis is still the most common cause of a positive test, and the differential diagnosis should begin with that assumption. More to the point in the present discussion,—it should be recalled that active syphilis may be present and the serologic test be negative. This is true not too unusually in tabes, cardiovascular syphilis, even in the gumma of the heart, as was demonstrated so dramatically in this hospital last year. Active syphilitic lesions may be present in the nervous system without meningeal reaction, if the lesion is sharply localized. There has been at least one, and I think probably two, instances of gumma of the brain proven at operation here with both negative blood and spinal fluid findings.

In speaking of false positive tests for syphilis it may be worth commenting that the treponema immobilization test which is the only actually specific test for humoral syphilitic antibodies seems to be highly specific. With very few exceptions it is of help in the diagnosis of past active syphilis, even though the ordinary serologic tests are negative, spontaneously or as the result of treatment. Unfortunately these tests can be done at only a few centers in the country and are not readily available.

DR. LOUIS D. ZEIDBERG: What is the prognosis in this case?

DR. SPROFKIN: If he stops smoking he probably has a fairly good prognosis. Under such circumstances he should fare bet-

ter than the patient with premature atherosclerotic disease of the cerebral vessels.

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The Treatment of Bone and Joint Tuberculosis. Smith, Allan DeForest. Bone & Joint Surg. 37-2:1214, 1955.

Streptomycin and the hydrazides of isonicotinic acid have become valuable adjuncts to our therapeutic armamentarium of bone and joint tuberculosis. In evaluating any new treatment, the author urges great care, pointing out first, the failure of making an accurate diagnosis and second, that tuberculosis of the joints is a disease characterized by remissions. Arthrodesis continues to be the safest and most efficient method of treatment. However, the effect of drugs is striking in abcesses and sinuses. There is evidence that synovial tuberculosis of the knee and of the tendon sheath of the wrist and hand may be treated successfully without surgery. The author strongly urges establishing a positive diagnosis, either by aspiration and guinea pig inoculations or by biopsy and pointing out the necessity to follow patients with tuberculosis for many years in order to make certain that there is not a reactivation of the disease. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

Amyloidosis

The patient, a 59 year old widow, was admitted to the Medical Service of Vanderbilt University Hospital complaining of nausea and vomiting of two weeks duration.

Her past health had been good, though at the age of 44 she was found to have glycosuria requiring only dietary restriction for control. For a similar period of time she had noted gradually failing vision due to bilateral lenticular opacities and had had successful removal of the lens on the right side about 3 years ago. The remainder of the system review was unremarkable save for mild indigestion many years before, said to have been due to "gall bladder trouble."

About six months before admission she noticed the insidious onset of generalized weakness and excessive fatigue. Two months prior to admission she noted swelling of the feet which gradually progressed to massive edema of the lower extremities up to the waist, with swelling of the abdomen present for some two or three weeks before admission. During the two weeks immediately preceding admission she had anorexia and complained of persistent nausea and vomiting without abdominal pain or change in the color of her stools. She denied cardiovascular or genitourinary symptoms.

Physical Examination. The temperature was 98.2°, pulse, 68, respiration, 16, and blood pressure, 132/84. The patient was a well developed, markedly edematous woman without evident pallor, who appeared chronically ill but surprisingly cheerful. The skin showed evidence of recent weight loss and was edematous below the thorax. Several "atypical" hemangiomas were found over the malar areas and upper thorax. There was no jaundice and the eye, ear, nose and throat were not remarkable except for a lenticular opacity on the left side and an iridectomy scar on the right. The tongue was not remarkable and there were no enlarged lymph nodes. The thyroid was not palpable and the breasts were normal.

The heart was normal in size with rate and rhythm regular. The lungs were clear and the diaphragms high. The abdomen was distended with peritoneal fluid, but a large mass could be felt extending beneath the right costal margin and across the epigastrium. The mass descended on inspiration and was described as being smooth, very firm, and nontender with an ill-defined rounded margin. The examiner interpreted this mass to be liver and no other organs or masses could be felt. The lower extremities were markedly edematous and rectal examination was normal. The deep tendon reflexes were active and equal.

X-ray Studies: EXAMINATION OF THE CHEST, PA: The bony thorax, heart and diaphragm are not remarkable. There is sclerosis noted in the arch of the aorta. There is a strand-like area of increased density in the right lung base. This has the appearance of pleural change. No frank infiltrative changes can be identified in either lung field.

UPPER G-I SERIES: The esophagus shows no abnormality. There is a sliding type of hiatal hernia present. The remainder of the stomach is within normal limits. There is an old deformity of the duodenal cap. The remainder of the duodenum is not remarkable. At 6 and 24 hours there is a normal rate of passage of the barium meal. Impression: (1) hiatal hernia; (2) old duodenal ulcer.

BARIUM ENEMA: The colon filled to the cecum with reflux into the terminal ileum. There are numerous diverticula scattered in the sigmoid and the descending colon, some of which measure approximately 1 cm. in diameter. No other abnormalities are noted. Conclusion: Diverticulosis of the colon.

EKG: "Suggests abnormal position of the heart."

Course in the Hospital. The patient was placed on a diabetic salt free diet with antispasmodics

Laboratory Data:

Urinalysis:	Character	Sp. Gr.	pH	Prot.	Sugar	Micro.
June 30	Yellow	1.006	6.5	2+	0	Occ. bact.
July 1	Amber	1.009	5.5	3+	0	Num. bact.

Blood Count:	WBC	PCV	I.I.	Sed. Rate	Diff.—6% mono.
July 1	13,150	49	15	34/34	73% seg.; 21% Lymph.

Chemistries:	FBS	NPN	TSP	A/G	Alk. p'tase	Bilirubin		Ceph. floc.
July 1	97	45	3.7	1.4/2.3	36.3	0.3	0.1	Negative
July 3	80		3.7	1.5/2.2	37.1			
July 7		38						
July 8		41	3.9	2.3/1.6				

	Prothrombin	Thymol	Uric acid	Cholesterol
July 3	100%	1.5	5.1	345

July 9 Urine albumin determination—24 hours,
Total vol.—1,350 cc. 6.84 gm/L; 9.2 gm/day.
Urine and ascitic fluid cultures all negative. Kahn-Negative.

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but continued to vomit throughout her hospitalization. Hydration had to be maintained by intravenous fluids. During her 15 days of hospitalization she received a total of 7 units (700 cc.) of salt-poor human serum albumin without any decrease in the edema. On the eighth hospital day a paracentesis was performed with removal of 1000 cc. of clear yellow fluid having a specific gravity of 1.008 and containing 100 RBC/cu. mm. and 900 WBC/cu. mm., 75% of which were mononuclear forms. Cell block on this fluid showed only degenerated leucocytes without evidence of malignant cells. On the eleventh hospital day she developed pain in the right calf with slight rise in temperature to 101° and a positive Homan's sign. During the subsequent four days her condition deteriorated rapidly with stupor, pulmonary rales, and slight jaundice, and she expired in her sleep on the fifteenth hospital day.

DR. R. H. KAMPMEIER: The case under consideration is that of a 59 year old woman, who was admitted because of nausea and vomiting of two weeks duration. The past history calls attention to glycosuria readily controlled by diet alone. Otherwise apparently she had been well except for alleged gall bladder trouble which apparently accounted for some so-called indigestion which had been present many years before.

About six months before coming to the hospital she noted generalized weakness and fatigue, to be followed in about four months by swelling of her feet, which went on to a massive edema of the lower extremities up to the waist, and swelling of the abdomen. This had reached its maximum some two or three weeks before admission. She had anorexia with this, and before admission nausea and vomiting had appeared without any abdominal pain, or apparent change in the stools.

A high point in the physical examination was the marked edema. Apparently there was evidence of weight loss demonstrated in the upper part of the body; it was said that she was edematous below the thoracic level. It was said that she had atypical hemangiomas over the malar areas and upper thorax. We don't know just what they mean by "atypical hemangiomas." However, there was no jaundice. The tongue was said to be unremarkable. The heart was described as being normal in size, weight and rhythm; the lungs were clear. The diaphragms were said to be high, as one might guess if she actually had ascites. The abdomen was distended apparently with free fluid, and a large mass was described in the upper abdomen extending across its upper portion, being nontender, and having a rounded edge. This was interpreted as being liver; it descended on respiration. We do not have any comment upon a pelvic examination.

The laboratory data show an albuminuria of pretty fair degree with apparently a negative sediment, if we may assume that the sediment was examined quite promptly and in the presence of an acid urine, or that it did not stand to develop bacterial growth. All we know is that microscopic examination is reported as negative. It is interesting to note that she had no anemia and a white count of 13,000; the sedimentation rate was elevated. There was nothing remarkable apparently about the differential picture. The icterus index was within the upper limits of normal.

She was presumed to be a mild diabetic some thirteen years before because of glycosuria, controlled only by diet. We note that her fasting blood sugars are 97 and 80 respectively; the NPN was just slightly elevated or on the upper borders of normal. The serum albumin was definitely down, reflected in the total protein. It is interesting to know that the alkaline phosphatase was clearly elevated and the direct bilirubin is up a bit. The liver function tests were essentially negative. The uric acid was in the upper limits of normal and serum cholesterol was elevated. The albuminuria was of such degree that she had as high as 9 Gm. a day output. X-ray studies showed the liver and the diaphragms to be pushed up; the middle lobe may have been atelectatic due to pressure. The rest of the X-ray studies appear on the protocol. The EKG was said to suggest an abnormal position of the heart; this may be merely the reflection of the upperward displacement of the diaphragm and the heart by the enlarged liver and the ascites.

Treatment accomplished little and she continued to vomit and fluids were given. Because of the hypo-albuminemia, treatment was attempted with salt-poor serum albumin with the hopes of improving the osmotic pressure and to reduce the edema.

We see that fluid obtained on paracentesis

had the characteristics of a transudate, and there was nothing very remarkable about the cellular findings. There were more white cells than red cells; it was not a sanguinous fluid; and we find that most of the cells were of the mononuclear variety. The cell block showed no evidence of malignant cells.

She apparently developed thrombophlebitis in the right calf. Then things went from bad to worse. She developed stupor, and from lying in bed, and with the high diaphragm, developed pulmonary congestion. Rales were heard in the chest, and then we also find that she apparently became a bit more jaundiced as the days went on and she died some six months after she became ill.

In the past history presumably was a very mild diabetes. There is a question of diabetes, since all we know is that she had glycosuria but no proof that she definitely had diabetes. There is also the story of failing vision and the development of cataracts. I mention that if she had diabetes, it would be unusual to have cataracts because it was so mild. We do know that cataracts do develop at this woman's age in diabetics of the more severe and uncontrolled type.

A large mass in her abdomen was interpreted as that of liver. She had some evidence of hepatic insufficiency, if we assume the atypical hemangiomas were of the spider type and evidence of disturbance in estrogen destruction. She had hypo-albuminemia; an elevated phosphatase, slight jaundice and an increase in jaundice; these go with some intrahepatic obstruction. She died with progressive jaundice going into coma without convulsions. The ascites was of the transudate variety; she had alubminuria. There was no evidence of renal failure in terms of nitrogen retention, nor hypertension. Allegedly no formed elements were found in the sediment, and that's where we stand insofar as the kidneys are concerned.

She died in coma or stupor, and had had no convulsions, the NPN was not elevated. We have the question of whether she died in hepatic coma, uremic coma or in acidotic coma. I believe she did not die in acidosis and know she did not die in uremia. She had, towards the end, presumably thrombophlebitis in the right leg.

There are several things we must consider in the diagnosis. Some to be dismissed rather rapidly, some to be discussed more carefully with the hope that we may come up with a probable answer.

I am sure one would reason,—here is a woman some 50 years of age with a story of ascites, weight loss, gastrointestinal symptoms, some evidence of disturbed hepatic function, having angiomas, and therefore there is the possibility one may be dealing with *hepatic cirrhosis*. But we have nothing in the history which gives us any clue that she had any dietary deficiency, or that she had taken alcohol, factors which might play a part in the development of cirrhosis. Actually the ascites, the angiomas, and the changes in the liver function may fit this diagnosis very well. However, if our interpretation is correct, if this woman does have a large liver, referring to the mass in the upper abdomen, it does not fit Lannaec's cirrhosis by definition. However, it is certainly true also that the person in this age, who has a fatty liver, let us say in an alcoholic, may, in the presence of a large liver, develop a rather rapidly progressive course as described here, dying in a relatively short period of time without having developed the stage of true cirrhosis. However, that is a pretty rapid course and I feel sure we would be dealing under such circumstance with an individual who gave us a history or a background which would fit with that type of liver, namely, an alcoholic liver. I also would like to point out that in such a progressive course the person would not be described as being a "cheerful person"; presumably the patient was an alert, rather cheerful sort of individual, and not in a state which would make one think she was stuporous or bordering upon a comatose condition. Cirrhosis seems very unlikely, and further, two things would be most difficult to explain. One, the edema of the lower extremities, might not be so difficult, depending on the degree of ascites. Of course, with enough ascites, edema does take place because of obstructive pressure to the return circulation in the iliac veins. But her edema preceded the ascites, and let us remember that according to the story

and from the description I doubt she really had such massive ascites as to cause this degree of edema. Secondly, we have here a heavy albuminuria which would be most difficult to explain on the basis of cirrhosis. Actually what one is dealing with in this woman is a nephrotic picture, but at the same time associated with it some evidence of hepatic disease.

When one considers the nephrotic syndrome in an individual who is leaking albumin through the glomeruli, who has developed hypo-albuminemia, has some elvation of cholesterol, has edema and ascites, we have other diagnoses to consider. She is a diabetic, and a relatively mild diabetic. But she would have had to be a more or less uncontrolled diabetic, over a long period of time, to consider seriously *intercapillary glomerulosclerosis* of the so-called Kimmelstiel-Wilson disease picture. However, as we see that picture, and certainly as the patient is approaching death, though some of this story is compatible with the nephrotic syndrome, we would anticipate some other things which are missing. I recall those we have seen at this stage have had retinopathy, and nothing was mentioned here of retinopathy, and have shown evidences of renal failure with more azotemia than this patient had. The blood pressure may very well be elevated in such cases also. She lacks some of these important items. And then, in addition, she has something which is difficult to fit into intercapillary nephrosclerosis; that is the matter of the presumed hepatomegaly associated with evidences of disturbed liver function.

Now when we consider all these facts, another picture is to be brought up which might fit the situation. So let us talk about *amyloidosis* and particularly, if this should turn out to be such, let us talk about secondary amyloidosis in this particular case, and not the primary type. Primary amyloidosis is associated in the main with infiltration in the mesenchymal tissue as in the subcutaneous tissue, in muscle smooth or striated, and therefore in the heart and in the gastrointestinal tract. You notice I commented upon the liver enlargement, but that the tongue was not enlarged,—the macroglossia of amyloidosis s o m e t i m e s points to primary amyloidosis. So primary amyloidosis is a different picture and very commonly, from reports, these people are frequently unsuspected of suffering from amyloidosis, being thought to be suffering from, and dying of cardiac failure, probably on an arteriosclerotic basis, since most of the cases fall into the older age group.

Now secondary amyloidosis is something that we used to see more frequently but rarely see any more; it was commonly found as the result of chronic suppurative processes. Tuberculosis, chronic osteomyelitis with draining sinuses, tuberculous osteomyelitis as in Pott's disease, in chronic lung abscess, and sometimes bronchiectasis with abscess formation were common antecedent conditions. One occasionally sees it also in some other chronic diseases as rheumatoid arthritis, and chronic disease of the liver, as gummatous hepatitis, may be associated with secondary amyloidosis also. But this woman gave no evidence of having any of the things we have commonly associated with the development of secondary amyloidosis. However, secondary amyloidosis may be found in some other diseases, and sometimes apparently with no cause at all, when post-mortem studies are considered. It may accompany malignancies at times. We have seen it in Hodgkin's disease, and more and more cases are appearing in the literature recently in association with multiple myeloma. Diseases, you see, which do not fall into the same category as a chronic suppurative disease which we mentioned a moment ago.

Now, I believe we can say that the picture in our case is entirely compatible with amyloidosis of the secondary variety. The picture of nephrosis, the hepatomegaly and disturbance of hepatic function are compatible with secondary amyloidosis. One cannot find much wrong with such reasoning in this particular case, except that we don't have a good etiology or background for its development. We mentioned increasing reports of myeloma as a cause, but this woman lacked some of the things we would expect. The radiologist had a chance to look at some of the bones and did not notice any bone lesions though, of course, other bones might have been involved rather than those visible in the examination. She doesn't have the hyperglobulinemia which

we anticipate in these cases. The blood count doesn't help us unless the case is of the variety which is associated with the plasma cell type of leukemia. Thus, we have no evidence as to bone lesions, bone pain, no evidence of hyperglobulinemia, and the urine was not tested for Bence-Jones protein. I might say, incidentally, that in secondary amyloidosis, we should have some hyaline casts and waxy casts in the sediment. They are variable but they should be present at some time. Another interesting thing about the nephrosis of amyloidosis is the variability in the albuminuria from time to time. In a person with secondary amyloidosis due to tuberculosis, or what have you, it is interesting to find in the specimens day to day variations, one time there will be a 1 plus, and another time a 3 plus albuminuria, a curious variation as one follows the course of these patients.

As to malignancy as a cause of secondary amyloidosis all I can say is all of us have missed malignancies time and again. We have no clue here of possible malignancy. All we know is that something has been going wrong for six months, and this went on for four months before she began to develop edema. Of course, she had to lose a certain amount of albumin and get her serum albumin down to a certain level, before she developed the edema, and I do not know for sure just what this means in terms of a possible malignancy.

As far as the lipoid *nephrosis* of the youngster is concerned we can leave that out of the picture. As to the nephrotic picture in a person who has had *nephritis* we have no evidence of either acute nephritis in the past nor of a subacute stage, nor do we have evidence that she might have had chronic nephritis and then developed, following infection, a nephrotic syndrome. As you will recall, we have had no change in blood pressure, and no change in her nitrogen retention. I do not think it very likely that this woman had *sarcoidosis,* which may be associated with hepatic enlargement. She probably would have had hyperglobulinemia and probably pulmonary involvement. So there is nothing which really suggests this possibility, and I feel she would have had some further evidence in the course of events. As I thought about a woman of this age developing edema and ascites, I wondered why the pelvic examination had been left out, either not done, or left out of the protocol. In an elderly woman one sometimes sees pressure edema as the first sign in the *papillary cystadenoma* of the ovary, which is not too unusual, and later give rise to ascites, increasing edema and the like. However, it does not metastasize to the liver. The hepatomegaly, the nephrotic syndrome just wouldn't make any sense in such a diagnosis. Whether she could have had a *tumor in the kidney or liver itself,* hepatoma or a primary tumor of the kidney seem improbable. The liver is not described as being nodular as would be expected in metastatic disease. I should point out, however, that we cannot be too sure about whether or not a liver is nodular when there is a fair amount of fluid present in the peritoneal cavity.

I believe I can fit things together best on the basis of *amyloidosis,* of the *secondary* variety, admittedly with no known cause. I think the evidence is strong enough for the diagnosis. She became stuporous possibly precipitated by the fever which was associated with the thrombophlebitis. This with the febrile episode may have precipitated progressive increase in jaundice. We do have evidence that she had evidence of intrahepatic obstruction and progression into hepatic coma. I do not think she died in uremic coma. I must say I am a little surprised that she did not have some convulsive seizures with this before death.

DR. J. L. SHAPIRO: At autopsy, there was a bronchopneumonia and atelectasis which were predictable, I believe, from the X-ray films, and which were terminal events. We did not demonstrate any evidence of embolic phenomena to the lung, as might have occurred in association with the thrombosis that she apparently had in the leg vein. The diagnosis on this patient is amyloidosis of the liver, spleen, adrenals and kidneys. The distribution of amyloid for the most part is that which we associate with the so-called secondary amyloidosis, as Dr. Kampmeier mentioned. I would like to discuss some of the lesions that we see in this particular case, and make a few comments about the distribution of the material.

The liver was large and weighed 2,200 grams. It was noted that it was firm and tended to retain its shape when it was incised. The pallid cut surface is illustrated in figure 1, and also the classical stain for



FIGURE 1.

amyloid. We have placed a dilute iodine solution on the liver, and one can see the dark, mahogany brown color which we associate with amyloid infiltration. This picture is quite characteristic. In contrast one sees the pallid areas and this imparts the so-called lardaceous appearance to the liver which is the site of amyloid deposition.

The spleen was moderately enlarged and weighed 220 grams, but again showed obliteration of normal architecture and was very characteristically infiltrated with amyloid on gross examination. The kidneys showed slight enlargement; these showed again the positive iodine stains associated with amyloidosis. In the microscopic sections of liver darker-staining cells represent atrophic liver cells. You can see the amount of pressure atrophy that has occurred in the cells throughout this section, and this section exhibits the picture throughout the liver. The homogeneous pink staining amyloid in its characteristic deposition beneath the endothelial layer in the sinusoids, and the atrophy of the liver cells that occurs in association with it are well demonstrated. I would like to point out that the capillary bed is still open here as well as elsewhere. A section of spleen shows again the diffuse hyaline infiltration that occurs in amyloidosis in the spleen. Infiltration occurs early about the lymphoid corpuscle, later extending through the pulp. The characteristic lesion is the homogeneous pink staining material deposited throughout the sinusoids, beneath the capillaries. Here is a section of the kidney. I think the renal lesion of amyloidosis is especially interesting in view of the massive albuminuria that is seen so frequently. In this glomerulus (Fig. 2) note the amyloid deposition beneath



FIGURE 2.

the endothelium of the capillaries of the glomeruli. Note that the capillaries are patent. This is a capillary lumen, this is one here, and in many areas you can see red cells filling up these capillaries. The initial deposition of amyloid in the kidney occurs beneath the capillary endothelium, and the albuminuria almost certainly results from increased permeability of this membrane. When one makes a comparison of this type of hyaline material deposition in the kidney glomeruli with that seen in intercapillary glomerulosclerosis one cannot tell the difference absolutely on the basis of hematoxylin-eosin sections, though fre-

quently the hyaline deposition in intercapillary glomerulosclerosis is more prominent at the hilus of the glomerulus and tends to fan out into the lobules of the glomerulus instead of being diffuse and evenly distributed throughout, as is shown here. The kidney was uniformly involved in this case though this was not an advanced stage of amyloidosis of the kidney. Other sections show the infiltration into the adrenal glands, a very frequent site of amyloid deposition. Most areas in the adrenal gland were not involved to marked extent, but the cord cells were atrophic and replaced in areas by pink staining amyloid material. As I said, the distribution of amyloid in this case was that we associate with secondary amyloidosis. We could find no histologic evidence of diabetes mellitus. This does not either rule in or rule out the presence of the disease clinically. As you know, we cannot make this anatomic diagnosis very frequently. Secondary amyloidosis is said to occur in association with long-standing diabetes mellitus. Now, we have no other explanation for this case exhibiting the distribution of secondary amyloidosis. There was some deviation from the normal in the bone marrow with a question of plasma cell myeloma being brought up in this case, though I do not think we can substantiate that diagnosis on the basis of the histologic sections. We have here then an example of *amyloid deposition of a secondary type,* apparently without a definite preceding cause.

Perhaps the classification of primary and secondary amyloidosis should be replaced by typical and atypical amyloid deposition depending on the distribution of the material. There has really been very little advance in knowledge concerning the nature and origin of this material. The fact that amyloidosis is usually associated with an elevated globulin in the blood is probably significant. The fact that it occurs in experimental animals which become hyperimmune after repeated inoculations for anti-serum production is interesting in view of the occurrence of amyloidosis in patients with chronic infections such as tuberculosis and recurring osteomyelitis.

The President's Page



Dr. Trabue

The subject of this letter is chosen because of my strong conviction that the Tennessee State Medical Association should not lose any appropriate opportunity to pay tribute to and give heartfelt thanks to our Woman's Auxiliary for the splendid job they are doing in our behalf. The post-World War II years have seen a tremendous growth and broadening of the scope of activities of the T.S.M.A. Our Association has taken its proper place in the fields of public relations; interest in and promotion of legislation; public service; community affairs; and efforts to help solve the problems of the public in the field of medical economics. There is no doubt that the Auxiliary has kept pace and, in more than one instance, they have led the way and set the example for us in these non-scientific matters which are so all important in today's practice.

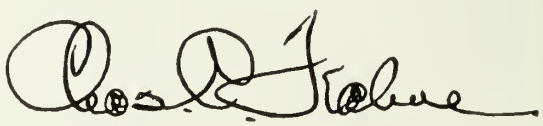
Our Auxiliary is not a "Tea and Gossip Society." They conduct their affairs in a most businesslike manner and their work has been startlingly ambitious and gratifyingly effective. The Auxiliary is not independent of the T.S.M.A. and, to my knowledge, has never been known to carry on any activity contrary to the counsel of their Advisory Committee—a group of doctors appointed by our Board of Trustees.

The general program of the Auxiliary is to provide "informed leadership in Community health." More specifically the Auxiliary has been busy, and effectively so, in the following fields: (1) Leadership in Health Education (this is a broad field and includes dissemination of literature; speeches and movies for lay groups; promotion of radio, press and TV publicity, all to promote the education of the membership and the public in matters related to health). (2) School Health Project (a statewide contest to interest high school students in good health). (3) Raising funds for the American Medical Education Foundation (the T.S.M.A. appropriated $1,000 from its funds, but apparently the ladies are going to raise more money than this through their own efforts). (4) Nurse recruitment, nurse scholarships and Future Nurses Clubs have been important and successful activities. (5) The "Get Out the Vote Campaigns" put on by several local auxiliaries have promoted better citizenship in a very real way. (6) Promotion of the sale of subscriptions to "Today's Health" has resulted in a wide circulation of this A.M.A. publication for lay people. (7) The establishment of a loan fund for medical students is an effective weapon against the propaganda that only the well-to-do can study medicine. (8) The Auxiliary has given leadership in Civil Defense work, campaigning in various communities for mass blood typing and widespread lay training in first aid.

Though not exactly a project, the Auxiliary has accomplished much through its sponsorship of social activities which promote friendship and good will among the doctors and wives of the community. And we cannot estimate the good will created in a community by individual members who are not intelligently informed on all these affairs relating to medicine. In fact, it is often the wife who brings the doctor up to date in many of these matters.

And so we would do well to encourage our wives in their Auxiliary work and to encourage the formation of more groups in the smaller county societies. The doctor who fails to see the value of auxiliary work is so far out of date that you would not expect him to see any value in the use of antibiotics. If we fail to encourage the Auxiliary we will lose one of the greatest potentials that we have in the broad field of public relations. 'Never underestimate the power of a woman,' much less the power of an organized group of educated and dedicated women.

Orchids, Ladies, to all of you, and may you continue your interests in the affairs of medicine!



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MARCH, 1956

EDITORIAL

OVERWEIGHT

During the past few years much has been written about obesity as the primary health problem in the United States. The suggestion has been made on grounds that are not scientifically tenable that the mortality rate in this country is greater than in Italy or the Scandinavian countries because of our excessive appetites. We as physicians do not have a particularly hard task in convincing patients that being fat is bad. It is widely accepted that obesity results simply from overeating and is not due to hormonal imbalance or heredity or any other excuse used by fat people (or fat doctors). Fat people are the despair of tailors and dressmakers. They occupy too much space in elevators and subways. Appendices and ovaries are much more difficult for the surgeon to find in fat people. We are conditioned by our Puritan forefathers to condemn self-indulgence as a form of immorality, and it would appear that overeating is the bodily expression of this immorality. The feeling of guilt which envelops a person following a particularly satiating meal is reinforced by what his physician tells him about how shameful overeating really is. Finally, in desperation, with or without the pleading of his patient, a physician writes countless prescriptions for amphetamine sulfate in any of its forms, doles out diets supposed to take off pounds (because if he does not, the diet of one of our well-known clinics will) and cajoles patients about will power and the like. All of this is done to get rid of obesity.

What is obesity? Or what is more important, when is a patient fat? If we are to follow the height-weight tables of insurance companies we are neglecting normal variables in the population. Keys[1] in a recent publication asks some very pertinent questions about this problem. If a man is 15 per cent overweight by the weight tables, how fat is he? Some are very fat when they are 15 per cent overweight. Others who are well developed and muscled have no excess weight. Let us consider two men who according to the height-weight tables should each weigh 70 Kg. The average for this age, height and weight is a body content of about 12 Kg. of fat and 30 Kg. of muscle. The first man weighs 70 Kg., 'perfect' according to the table, but his body contains 18 Kg. of fat and 24 Kg. of muscle. He is 50 per cent 'overfat' in spite of the table. The second man weighs 80 Kg. but his body contains 12 Kg. of fat and 40 Kg. of muscle. He is not 'overfat' at all, but the table says he is 15 per cent overweight. If he listens to the advice of his physician he is apt to go on a diet, making himself and his wife unhappy, and if he persists he must go into negative nitrogen balance to satisfy the physician and his tables.

Of course it is most difficult to measure clinically the amount of fat in the body. The busy practitioner or even the one with time on his hands cannot start measuring body densities in and out of water and correcting by subtracting a standard value for residual air. He can, however, go back to

[1]Keys, Ancel: Relative Obesity and Its Health Significance, Diabetes 4:447, 1956.

the method of early animal traders, as well as those in the market for wives, and pinch up a fold of skin with its attached subcutaneous tissue. Skinfold calipers have been used sporadically for 30 years, but neither the method or data have been standardized. The subcutaneous fat layer is not uniform all over the body and the distribution varies with age and sex. The two most accessible and informative sites are over the triceps muscle of the upper arm and over the tip of the scapula. Various studies have showed that there is no correlation between the degree of overweight and the thickness of subcutaneous fat. Sedentary clerical workers tend to be fatter in proportion to their weight than do employees in a steel mill by this method. This is reasonable and emphasizes the fallacy of using simple height-weight charts in which the difference would remain hidden.

This is not an attempt to justify obesity but rather a plea for physicians to individualize their patients. Possibly our concepts regarding overweight and its relationship to various diseases are not as valid as we previously thought. Let us look at patients, feel their skin folds and forget height-weight tables before putting them on reduction diets.

A. B. S.

★

WHAT DO THEY THINK OF US?

"Oh wad some power the giftie gie us
To see oursels as others see us!"

This power to see ourselves in the eyes of the public has been provided by a nationwide survey made by an independent research agency for the American Medical Association. The survey is the result of interviews with 3000 persons to represent the public and of 500 doctors in private practice. Statistical sampling has been so well worked out in the many polls taken that this survey unquestionably may be accepted as significant.

Some of the results turned up in the survey came as a surprise to your Editor. However, some of it again illustrates the fact that if propaganda is to be effective it must be front-page news if there is no reader interest.

Many physicians unquestionably had felt that organized medicine, and specifically the American Medical Association, had received a merciless beating several years ago at the time of the Whitaker and Baxter contract and the fight against socialized medicine. Editorials, columnists, news pundits and labor papers flayed the A.M.A. Yet now, in the survey, only 48 percent of the public have heard or read of the A.M.A. and only one-fifth of these recall anything specific about it. The knowledge about the A.M.A. is of lower incidence in the labor union families than in nonunion ones. Of those who know about the A.M.A., only 5 percent have bad impressions that outweigh the good ones; 13 percent say these are about equal; 26 percent found that their impression was more good than bad; and 43 percent had a favorable impression. The fifth who know the A.M.A. relate it to investigation of drugs, professional standards, meetings and conventions, research, regulation of the profession, schools and hospitals and only 2 percent described it as a doctor's union or trust and mentioned its political and lobbying activities. Thus among the public it appears that those who know the A.M.A. have a favorable impression, far more than among editors and commentators, 24 percent of whom have bad impressions.

A half of those who know the A.M.A. think that a few doctors run it; 56 percent of these persons feel the organization is doing a good job in getting along with the public. Almost all who know about the A.M.A. recognize that it approves voluntary health insurance, but do not know its feelings about group practice. Local grievance committees are considered good. Small percentages of those who know of the A.M.A. feel it should have better control of fees, quacks, and fee splitting. It appears the majority are in favor of the A.M.A.'s policies in accepting new drugs and treatments, indicating these provide rapid enough acceptance, and, since the questioning involved the time of the Salk vaccine controversy, a specific question was introduced. Three-fifths of the public thought the stand on the vaccine reflected credit upon the profession.

Regarding the political activities of the A.M.A., 47 percent of the public had no opinion; 15 percent felt it was too active;

4 percent thought it too inactive; 13 percent thought it inactive, and 24 percent thought its activity was just about right.

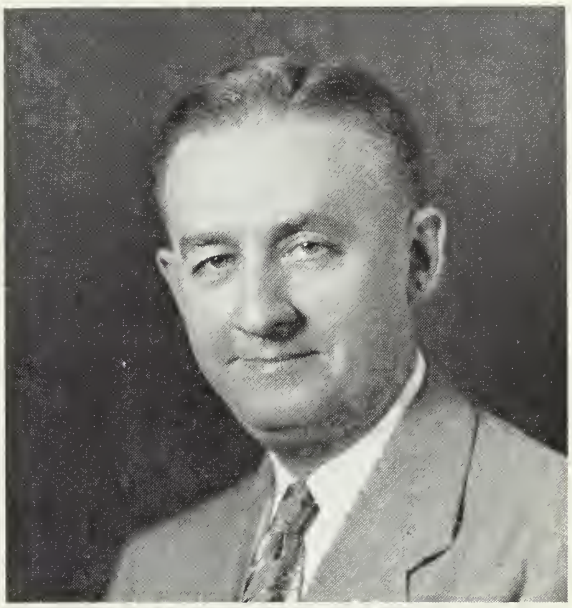
In the section on medical economics it is of interest that the public has great faith in its own physician and is more critical of the profession in general than of its own doctor. Thus only 16 percent feel their own doctor's fees are too high, whereas 43 percent say most doctor's fees are too high. Only 13 percent believe their doctor's fees have gone up faster than other living costs though 35 percent say this is true of most doctors' fees. About one-third of the public believe doctors make too much money. Thirteen percent accuse their doctor of charging higher fees if they have medical insurance; 31 percent say most doctors do this. The groups most critical of doctors' fees are people of lower income, people in the South, non-whites, those without a high school education and those who have no family physician. Much higher percentages are critical of the costs of hospitalization and drugs than of doctors, indicating a feeling of a much more disproportionate rise in these categories of medical expense.

With the growing belief that medical insurance is tending to fix fees, the reaction to a question whether doctors should charge those having more money a higher fee was sought. The public opinion was about equally divided "for" and "against." However, more than half thought their doctor charged the same fee to all patients except in charity cases. Three-fourths of patients feel a doctor should give cost estimates in the care of major illnesses. About one-half of those questioned say their doctor gives cost estimates, 30 percent get no estimate.

Relative to present-day insurance plans, about half the public thinks them satisfactory. However, of those who dislike the A.M.A. 61 percent feel present insurance plans are inadequate, as does the next highest group, 36 percent, in upper income groups and college-trained persons.

The report of this survey is lengthy and will not be read in detail by many physicians. Yet it is important to, and should be read at least by the officers of county and state medical societies and by all those who have occasion to interpret the medical profession and its functions to the public.

R. H. K.



Dr. F. J. L. Blasingame

CAT.

"Organized Medicine and Its Role in Modern America"

Dr. F. J. L. Blasingame of Wharton, Texas, will give the address on the President's Night. He will discuss "Organized Medicine and Its Role in Modern America."

Dr. Blasingame has lived practically all his life in Texas, received his education there, including his M.D. degree from the University of Texas, the Medical Branch at Galveston, in 1932. He taught anatomy at his Alma Mater. He has been in private practice in Wharton since 1937, one of an eight-man group, with special interest in surgery. There he immediately became active in the affairs of the county medical society and of the state association. He has served as a delegate from Texas in the A.M.A. House of Delegates since 1944. Since 1953, he has been a member of the Board of Trustees of the A.M.A. and is a member of its Executive Committee. Thus, he is well qualified to present the subject of his title.

Special Section

SCIENTIFIC PROGRAM OF THE 121ST ANNUAL SESSIONS OF THE TENNESSEE STATE MEDICAL ASSOCIATION

Sunday, April 8, 1956

2:00 P.M.

House of Delegates, Cadet Room, Hotel Peabody

☆

SPECIALTY SOCIETIES

TENNESSEE SOCIETY OF ANESTHESIOLOGY

SUNDAY, APRIL 8, 1956

Room 212 **Hotel Peabody**

12:00 Noon

Luncheon

1:00 P.M.

Scientific Program

Demonstration of Blood Oxygeneration Apparatus
GWEN ROBBINS, M.D.
OREN BUTTERICK, M.D.

Business Meeting

☆

Monday, April 9, 1956

General Scientific Sessions Program

Continental Ballroom **Hotel Peabody**

WM. N. COOK, M.D., Columbia, Vice President, TSMA Presiding

9:00 A.M.

Cancer of the Thyroid (Movie)

Sponsored by the Cancer Committee of the TSMA, in cooperation with Tenn. Div. of American Cancer Society.

9:25 A.M.

The Use and Abuse of Tranquilizing Drugs

By: DR. PHILLIPP C. SOTTONG, Chattanooga
Discussed by: DR. GUY ZIMMERMAN, JR., Chattanooga

9:50 A.M.

Management of the Leukemias

By: DR. ROBERT J. BRIMI, Knoxville
Discussed by: DR. E. N. GOULDIN, Memphis

10:15 A.M.

Visit Exhibits

10:45 A.M.

Results In Weaning and Rehabilitation of Poliomyelitic Patients Requiring Respiratory Aids

By: DR. RANDOLPH BATSON and DR. H. D. RILEY, JR., Nashville

Discussed by: DR. J. WILLIAM HILLMAN, Nashville

11:10 A.M.

Symposium: Anesthesia and Anesthetic Agents
DR. RAY G. STARK, Memphis—Moderator

The Selection of Anesthetics for Operations
DR. FRANK S. BRANNEN, Chattanooga

The Use of Musele Relaxants
DR. MARY F. POE, Memphis

Dangers of Hypoxia and Hypercarbia
DR. LAWRENCE G. SCHULL, Nashville

Anesthesia for Obstetrics
DR. LEONARD J. VERNON, Memphis

SPECIALTY SOCIETIES

TENNESSEE CHAPTER AMERICAN COLLEGE OF SURGEONS

MONDAY, APRIL 9, 1956

UNIVERSITY OF TENNESSEE INSTITUTE OF PATHOLOGY
858 Madison Avenue

2:00 P.M.

Program Presented By THE DEPARTMENT OF SURGERY COLLEGE OF MEDICINE

DR. HARWELL WILSON, Presiding

Intravenous Fat Infusion: Experimental Studies
DR. E. H. STORER

Experimental Studies in Forced Feeding
DR. JOHN R. LOVELACE

Preparation of Arterial Homografts
DR. EUGENE BRAMLITT

Demonstration of Pump Oxygenator for Open Cardiac Surgery
DR. S. G. ROBBINS
DR. O. D. BUTTERICK

The Use of Radioactive Phosphorus (P^{32}) in Determination of the Circulation of the Femoral Head
DR. HAROLD BOYD

Perforation of the Intestine Through the Intact Abdominal Wall
DR. J. T. DUNCAN, JR.

The Value of Supraclavicular Lymph Node Biopsy
DR. E. F. SKINNER

Melanin Spots and Polyposis
DR. R. M. POOL

Salivary Gland Tumors
DR. EDWIN W. COCKE, JR.

Chronic Thyroiditis
DR. C. E. GILLESPIE

The Bleeding Nipple
DR. R. R. BRAUND

Congenital Megacolon
DR. R. H. PATTERSON, JR.

Pheochromacytoma
DR. R. M. MILES

Uncommon Lesions of Rectum and Colon
DR. L. H. MAYFIELD

Surgery of the Abdominal Aorta (Motion Picture with Personal Narration)
DR. HARWELL WILSON

Question and Answer Period
5 P.M.—Council Meeting

TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

MONDAY, APRIL 9, 1956

Room 200 **Hotel Peabody**

Scientific Program:

1:30 P.M.

Called to order. Dr. Olan E. Ballou, Knoxville, Presiding

1:45 P.M.

Use of ACTH in Retro-bulbar Neuritis
Stewart Lawwill, Jr., M.D., Chattanooga

2:10 P.M.

Retinal Detachment Due to Cyst Treated with Diathermy
James E. Wilson, M.D., Memphis

2:35 P.M.

Case Report of Central Macular Hemorrhage Treated Successfully with Parenzyme
Ira M. Long, M.D., Chattanooga

3:00 P.M.

Toxoplasmosis Case Report
Margaret E. Horsley, M.D., Memphis

3:15 P.M.

Intermission

3:30 P.M.

Acute Lye Burns of the Esophagus
Harry R. Morse, M.D., Knoxville

3:50 P.M.

Amyloidosis of Larynx Case Report
Thomas M. Jackson, M.D., Memphis

4:15 P.M.

Halitosis
Charles E. Long, M.D., Memphis

4:35 P.M.

Business Meeting

6:30 P.M.

Social Hour—Cadet Room

7:15 P.M.

Banquet (Ladies Invited)—Cadet Room

WOMAN'S AUXILIARY TO TENNESSEE STATE MEDICAL ASSOCIATION

Registration—Main Lobby—9:00 A.M.

APRIL 9, 10, 11, 1956

Hotel Peabody

Program

MONDAY, APRIL 9, 1956

1:00 P.M.

Pre-Convention Board Luncheon Meeting—Room 215

7:00 P.M.

President's Night Banquet (Dinner)—Continental Ballroom

All Auxiliary members invited

TENNESSEE ACADEMY OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

Room 212 **Hotel Peabody**

MONDAY, APRIL 9, 1956

12:30 P.M.

Luncheon

Members and Guests

1:30 P.M.

Cecil B. Tucker, M.D., President, Nashville Presiding

Scientific Session:

Open to all members of the Tennessee State Medical Association

Speaker

Robert W. Quinn, M.D., Professor of Preventive Medicine, Vanderbilt University School of Medicine, Nashville.

Subject

The Epidemiology And Prevention of Rheumatic Fever

A business meeting will follow the Scientific Session.

TENNESSEE SOCIETY OF PATHOLOGISTS

MONDAY, APRIL 9, 1956

Sample Room—Third Floor—Hotel Peabody

12:00 Noon

Dutch Treat Luncheon

Scientific Program:

1:30 P.M.

Aspects of the Experimental Pathology of Choline—Deficient States

Dr. W. Stanley Hartroft, Washington University School of Medicine, St. Louis, Missouri

2:30 P.M.

Laboratory Aids in the Diagnosis of Toxoplasmosis

Dr. Donald E. Eyles
Dr. Colvin L. Gibson, U. S. Public Health Service, Memphis, Tennessee

3:05 P.M.

Intermission

3:15 P.M.

The Adrenal Lesions in Acute Meningcoccemia

Dr. John B. Thomison
Dr. John L. Shapiro, Vanderbilt University School of Medicine, Nashville, Tennessee

3:40 P.M.

The Significance of Splenic Calfications

Dr. Joseph M. Young, Kennedy General VA Hospital, Memphis

3:50 P.M.

Problems in Determining the Causative Organisms in Certain Chronic Pulmonary Granulomas

Dr. Stewart H. Auerbach, Veterans Administration Hospital, Nashville

4:30 P.M.

The Organization and Function of the Southeast District Blood Bank Clearing House

Dr. Merlin L. Trumbull
Dr. William W. Tribby, Memphis

4:50 P.M.

The Use of Radioactive Phosphorus (P-32) in the Study of Aseptic Necrosis of the Head of the Femur

Dr. Rocco A. Calandruccio, Memphis

5:05 P.M.

Business Meeting

5:30 P.M.

Fellowship Hour

TENNESSEE ACADEMY OF GENERAL PRACTICE

MONDAY, APRIL 9, 1956

Georgian Room—Hotel Peabody

SCIENTIFIC PROGRAM

2:00 P.M.

A Symposium on Peripheral Vascular Disease

Surgical Aspects:	William T. Satterfield, M.D., F.A.C.S., Memphis
Medical Aspects:	John T. Carter, M.D., Germantown
Psychiatric Aspects:	Robert A. Davison, A.B., M.D., Memphis
Moderator:	Arthur W. Green, M.D. Memphis

Business Meeting and Election of Officers—to immediately follow the Scientific Session

See Bulletin Board for Room Assignment for Scientific Exhibit

TENNESSEE STATE PEDIATRIC SOCIETY

MONDAY, APRIL 9, 1956

Le Bonheur Children's Hospital Amphitheater
848 Adams Avenue
Memphis

SCIENTIFIC PROGRAM

12:00-1:00 P.M.

Registration, Le Bonheur Children's Hospital, Conference Room

1:00-1:30 P.M.

Some Current Problems in Antibiotic Therapy
JOHN P. MCGOVERN, M.D., Associate Professor of Pediatrics and Chief of the Pediatric Allergy Clinic, Tulane University, New Orleans

1:30-2:30 P.M.

Recent Advances in Nutrition of Children
ROBERT L. JACKSON, M.D., Professor of Pediatrics, University of Missouri, Columbia

2:30-2:40 P.M.

Intermission

2:40-3:00 P.M.

Congenital Vascular Anomalies of the Central Nervous System in Children
ELMER C. SCHULTZ, M.D., Memphis

3:00-3:20 P.M.

Abnormal Hemoglobins in Hemolytic Anemias of Children
A. H. TUTTLE, M.D., Memphis

3:20-3:40 P.M.

Congenital Lobar Emphysema
S. GWIN ROBBINS, M.D., Memphis

Intermission

Business Meeting of the Tennessee State Pediatric Society

Hotel Peabody—Louis XIV Room

6:30 P.M.

Social Hour

7:30 P.M.

Banquet

TENNESSEE PSYCHIATRIC ASSOCIATION

MONDAY, APRIL 9, 1956

Room 213 **Hotel Peabody**

12:30 P.M.

Luncheon

1:30 P.M.

Scientific Session

Professional Papers

A Movie on Electro Convulsive Therapy Under Anectine and Pentothal
DR. HOLLIS C. MILES, Chattanooga

Psychiatry and Religion
DR. SAMUEL PASTER, Memphis

The Aspects Effecting Military Psychiatry
DR. ERIC BELL, JR., Nashville

A Report of the Benefits and Results on Patients from Eastern State Hospital in a Smoky Mountain Camp
DR. BEDFORD PETERSON, Knoxville

3:00 P.M.

Presidential Address

3:20 P.M.

Business Session

5:00 to 6:45 P.M.

Cocktail Party—Memphis Country Club
DR. and MRS. CARROL C. TURNER, Hosts

(For members of the Tennessee Psychiatric Association and the Board of Trustees of the Tennessee State Medical Association)

Tuesday, April 10, 1956

9:00 A.M.

House of Delegates, Cadet Room, Hotel Peabody

General Scientific Sessions Program

Continental Ballroom **Hotel Peabody**

WM. N. DAWSON, M.D., Maryville, Vice-President, TSMA, Presiding

9:00 A.M.

Surgical Management of Peptic Ulcer
By: DR. G. TURNER HOWARD, JR., Knoxville
Discussed by: DR. R. L. SANDERS, Memphis

9:25 A.M.

The Use of Cholangiography
By: DR. RICHARD VAN FLETCHER, Chattanooga
Discussed by: DR. GEORGE BAKER HUBBARD, Jackson

9:50 A.M.

Gout—A Neglected Entity
By: DR. LAURENCE A. GROSSMAN, Nashville
Discussed by: DR. MALCOLM H. WEATHERS, JR., Loretto

10:15 A.M.

Visit Exhibits

10:45 A.M.

Chronic Posterior Urethritis in the Female
By: DR. JOHN M. TUDOR, Nashville
Discussed by: DR. CHARLES C. STAUFFER, Jackson

11:10 A.M.

Symposium:
Present Day Treatment of Pulmonary Tuberculosis
DR. WALTON W. HUBBARD, Nashville, Moderator

Drug Therapy
DR. THOMAS B. HALTOM, Nashville

General Management and Pneumotherapy
DR. P. M. HUGGIN, Knoxville

Surgical Collapse Therapy
DR. SHELDON E. DOMM, Knoxville

Surgical Resection of Lesions
DR. FELIX A. HUGHES, Memphis

SPECIALTY SOCIETIES

TENNESSEE CHAPTER AMERICAN COLLEGE OF SURGEONS

TUESDAY, APRIL 10, 1956

Continental Ballroom **Hotel Peabody**

1:30 P.M.

Paper from an Intern or Resident

2:00 P.M.

Carcinoma of the Endometrium

Dr. G. Sidney McClellan, Nashville

2:30 P.M.

Trauma of the Genito-Urinary Tract

Dr. James H. Seamans, Duke University, Durham, North Carolina

3:00 P.M.

The Use of Ivalon as Arterial Prothesis in Experimental Animals

Dr. John J. McCaughan, Jr., Memphis

3:30 P.M.

Panel Discussion—Vascular Diseases

Moderator—Dr. William Scott, Nashville
Panelists—Dr. Laurence Grossman, Nashville
Dr. William Cate, Jr., Nashville
Dr. James A. Kirtley, Jr., Nashville

Question and Answer Period

4:30 P.M.

Business Session

* * * *

6:30 P.M.

Social Hour—Continental Ballroom

7:30 P.M.

Banquet—Continental Ballroom

Presiding—Dr. Hiram A. Laws, Jr., Chattanooga, President Tennessee Chapter of the American College of Surgeons

Guest Speaker—Mr. William C. Walkup, President, Home Federal Savings and Loan Association, Knoxville, Tennessee

TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

TUESDAY, APRIL 10, 1956

Room 200—Hotel Peabody

12:15 P.M.

Luncheon—Room 200—Hotel Peabody

SCIENTIFIC PROGRAM

1:30 P.M.

The Indications for the Endaural Approach to Surgery of the Temporal Bone

W. Likely Simpson, M.D., Memphis

2:00 P.M.

Treatment of Atrophic Rhinitis by Cartilaginous Implant—Case Report

Richard P. Bland, M.D., Memphis

2:25 P.M.

Movie—Technique of the Surgical Removal of the Upper Jaw

E. W. Cooke, Jr., M.D., Memphis

3:00 P.M.

Traumatic Paralysis of the Right Superior Oblique with Diplopia, Corrected by Surgery

E. A. Vaccaro, M.D., Memphis

3:25 P.M.

Movie—Cataract Extraction

George Bounds, M.D., Nashville

3:50 P.M.

Orbital Cellulitis—Case Report

Emmett M. Herring, M.D., Memphis

4:10 P.M.

Paralysis of Dextro-Rotary Movements of the Eyes—Case Report

William F. Murrah, M.D., Memphis

TENNESSEE RADIOLOGICAL SOCIETY

TUESDAY, APRIL 10, 1956

Peabody Hotel—Memphis, Tennessee

Room 215

12:30 P.M.

Luncheon and Business Meeting

2:00 P.M.

Scientific Session (Open)
Mediastinal Masses

By Dr. Ted Leigh, Professor of Radiology, Emory University School of Medicine, Radiologist Emory University Hospital, Emory, Georgia.

3:00 P.M.

Film Reading (Diagnostic Panel)

This panel will expertly diagnose films of proven cases to be submitted by members or guests. Cases to be submitted for diagnosis should be meritorious by virtue of their peculiar nature and supported by films of good diagnostic quality.

WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION

TUESDAY, APRIL 10, 1956

9:00 A.M.

Registration—Main Lobby

9:00 A.M.

General Session—Georgian Room—Hotel Peabody

12:30 P.M.

Installation Luncheon—Memphis Country Club

Mrs. Mason Lawson, National President, Honor Guest

TENNESSEE ACADEMY OF GENERAL PRACTICE

TUESDAY, APRIL 10, 1956

Louis XIV Room—Hotel Peabody

6:30 P.M.

Annual Banquet (Members and their wives)

Guest Speaker—Barton McSwain, M.D., Professor of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee

Subject: Tumors of the Breast

Installation of Officers

Adjournment

See Bulletin Board of Room Assignment for Scientific Exhibit

TENNESSEE STATE PEDIATRIC SOCIETY

TUESDAY, APRIL 10, 1956

Le Bonheur Children's Hospital Amphitheater

848 Adams Avenue

Memphis

SCIENTIFIC PROGRAM

10:30 A.M.

Le Bonheur Children's Hospital

Meeting for Members of American Academy of Pediatrics

12:30 P.M.

University Center

Luncheon for Doctors

1:30-2:00 P.M.

The Prognosis in Juvenile Diabetes Mellitus

Robert L. Jackson, M.D.

2:00-3:00 P.M.

Respiratory Tract Allergies in Children

JOHN P. MCGOVERN, M.D.

3:00-3:10 P.M.

Intermission

3:10-3:35 P.M.

Control of Hypertension in Acute Nephritis

JAMES N. ETTELDORF, M.D., and J. D. SMITH, M.D., Memphis

3:35-4:00 P.M.

Salmonella Osteomyelitis Complicating Sickle Cell Disease

JAMES G. HUGHES, M.D., Memphis

4:00-4:30 P.M.

A New Approach to Endocardial Fibroelastosis,

R. N. PAUL, M.D., Memphis

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TENNESSEE THORACIC SOCIETY

TUESDAY, APRIL 10, 1956

Room 213—Hotel Peabody

12:30 P.M.

Luncheon—Followed by Business Meeting

1:30 P.M.

Palleative Treatment of Bronchiogenic Carcinoma

DUANE M. CARR, M.D., Memphis

The Treatment of Pulmonary Emphysema

JAMES J. CALLOWAY, M.D., Nashville

Idiopathic Pleurisy with Effusion

CARL A. HARTUNG, M.D., Chattanooga

Treatment of Aortic Dissecting Aneurysm

W. K. SWANN, M.D., Knoxville

TENNESSEE DIABETES ASSOCIATION

TUESDAY, APRIL 10, 1956

Room 212—Hotel Peabody

SCIENTIFIC PROGRAM

1:00 P.M.

Symposium on Vascular Disease in the Diabetic Newer Concepts in Atherosclerosis

DR. ROB ROY, Nashville

Coronary Artery Disease in the Diabetic

DR. ALBERT WEINSTEIN, Nashville

Cerebrovascular Disease in the Diabetic

DR. DAN THOMAS, Knoxville

Peripheral Vascular Disease in the Diabetic

DR. CHAS. C. TRABUE IV, Nashville

Diabetic Retinopathy

DR. ROLAND MYERS, Memphis

TUESDAY, APRIL 10, 1956

Room 212—Hotel Peabody

6:30 P.M.

Dinner (Wives Invited)

Guest Speaker—ELLIOTT NEWMAN, M.D., Vanderbilt University, Nashville

Subject—**Fluid and Electrolyte Balance in Endocrine Disease**

TENNESSEE HEART ASSOCIATION, INC.

SECOND ANNUAL SCIENTIFIC SESSION

TUESDAY, APRIL 10, 1956

Georgian Room—Hotel Peabody

1:00 P.M.

Luncheon

SCIENTIFIC PROGRAM

2:00 P.M.

Certain Aspects of Myocardial Anoxia

DR. RICHARD BING, Professor of Experimental Medicine, Medical College of Alabama, Birmingham

2:45 P.M.

Early EKG Changes in Myocardial Infarction

DR. PHILIP H. LIVINGSTON, Chattanooga.

3:15 P.M.

Studies on the Origin and Fate of Atheromatous Lipids in Experimental Atherosclerosis

DR. D. B. ZILVERSMIT, Associate Professor of Physiology, University of Tennessee College of Medicine, Memphis

3:45 P.M.

Pulmonary Stenosis

DR. GORDON SELL, Assistant Professor of Pediatrics, Vanderbilt University College of Medicine, Nashville

4:15 P.M.

Use of Extracorporeal Heart-Lung Systems in Cardiac Surgery—Movie

DR. S. GWIN ROBBINS, Assistant Professor of Surgery, University of Tennessee College of Medicine, Memphis

Wednesday, April 11, 1956

General Scientific Sessions Program

Continental Ballroom **Hotel Peabody**

JAMES R. LEWIS, M.D., Ripley, Vice-President TSMA, Presiding

9:00 A.M.

Skin Planing in the Treatment of Acne Scars

By: DR. BERNARD J. PASS, Nashville
Discussed by: DR. MAX H. COHEN, Memphis

9:25 A.M.

Armchair Treatment of Coronary Disease

By: DR. CHARLES V. DOWLING, Memphis
Discussed by: DR. R. L. WOOTEN, Memphis

9:50 A.M.

Problems in Blood Clotting in Obstetrics

By: DR. JOHN W. ADAMS, JR., Chattanooga
Discussed by: DR. HARRY JONES, Chattanooga

10:15 A.M.

Visit Exhibits

10:45 A.M.

The Management of Cardiac Arrhythmias

By: DR. J. WARREN KYLE, Memphis
Discussed by: Dr. John D. YOUNG, Memphis

11:10 A.M.

Panel Discussion—The Use and Abuse of Antibiotics

DR. JAMES C. OVERALL, Nashville, Moderator
DR. WILLIAM G. CROOK, Jackson
DR. CARL C. GARDNER, JR., Columbia
DR. VERNON KNIGHT, Nashville
DR. JAMES N. PROFFITT, Maryville

SPECIALTY SOCIETIES

TENNESSEE MEDICAL FOUNDATION

WEDNESDAY, APRIL 11, 1956

Cadet Room **Hotel Peabody**

8:00 A.M.

Breakfast (Dutch)

From the Executive Secretary

ORGANIZATIONAL NEWS

Symposium Postgraduate Program for 1956

● The first circuit of the Symposium Postgraduate Education Program, on the subject "TRAUMATIC AND EMERGENCY SURGERY," was conducted in Crossville on February 20th—Murfreesboro on February 21st—Nashville on February 22nd—and Dickson on February 23rd. Panel members were: Marcus J. Stewart, M.D., Anthony P. Jerome, M.D. and Edward F. Skinner, M.D., all of Memphis. These physicians represented the specialties of Orthopedic, Plastic and Thoracic Surgery.

Future Schedule

● The following is a schedule of subjects, dates, panel members and places for the Symposium Postgraduate Education Programs to be presented in Tennessee during the remainder of 1956.

"TRAUMATIC AND EMERGENCY SURGERY"

East Tennessee

● Johnson City—Tuesday, March 27 *** Maryville--Wednesday, March 28 *** Chattanooga—Thursday, March 29. Panel members will be:
J. William Hillman, M.D., Nashville...Orthopedic Surgeon
Greer Ricketson, M.D., Nashville.....Plastic Surgeon
Walter L. Diveley, M.D., Nashville....Thoracic Surgeon

"JAUNDICE"

West Tennessee

● Paris—Tuesday, March 13 *** Brownsville—Wednesday, March 14 *** Memphis—Thursday, March 15. Panel members:
Harrison J. Shull, M.D., Nashville....Internist
Alva B. Weir, Jr., M.D., Memphis.....Hematologist
W. R. Cate, Jr., M.D., Nashville.....General Surgeon

"CHEST AND ABDOMINAL PAIN"

Chest Pain

● Selmer—Tuesday, May 15 *** Memphis—Wednesday, May 16 *** Union City—Thursday, May 17. Panel members:
Richard C. Sexton, Jr., M.D.,
Knoxville .....Internist
John H. Hall, M.D., Knoxville.....General Surgeon
William F. Meacham, M.D., Nashville...Neurologist

Middle Tennessee

● Lebanon—Monday, May 28 *** Fayetteville—Tuesday, May 29 *** Pulaski—Wednesday, May 30 *** Springfield—Thursday, May 31. Panel members:
S. Fred Strain, M.D., Memphis.....Internist
Edward H. Storer, M.D., Memphis.....Surgeon
Gene M. Lasater, M.D., Memphis.....Neurologist

East Tennessee

● Kingsport—Tuesday, June 26*** Knoxville—Wednesday, June 27 *** Athens—Thursday, June 28. Panel members:
F. Tremaine Billings, M.D., Nashville.Internist
Rollin A. Daniel, Jr., M.D.,
Nashville.....Surgeon
Bertram E. Sprofkin, M.D., Nashville..Neurologist

"CANCER—DETECTION AND TREATMENT"

Cancer Program Middle Tennessee

● Cookeville—Monday, September 24 *** Shelbyville—Tuesday, September 25 *** Clarksville—Wednesday, September 26 *** Columbia—Thursday, September 27. Panel members:

R. R. Braund, M.D., Memphis.....Gynecologist
Alvin J. Cummins, M.D., Memphis.....Gastro-enterologist
David S. Carroll, M.D., Memphis.....Radiologist

West Tennessee

● Memphis—Tuesday, October 9 *** Dyersburg—Wednesday, October 10 *** Jackson—Thursday, October 11. Panel members:
Albert W. Diddle, M.D., Knoxville.....Gynecologist
Tim J. Manson, M.D., Chattanooga.....Gastro-enterologist
John M. Crowell, M.D., Chattanooga....Radiologist

East Tennessee

● Greeneville—Tuesday, October 30 *** Oak Ridge—Wednesday, October 31 *** Cleveland—Thursday, November 1. Panel members:
John C. Burch, M.D., Nashville.....Gynecologist
Addison B. Scoville, M.D., Nashville..Gastro-enterologist
John Beveridge, M.D., Nashville.....Radiologist

Postgraduate Programs Enthusiastically Accepted By Those Attending

● Ask your doctor friends who have attended one of the Symposium Postgraduate Education Programs, how he liked it. Since the symposium type presentation is new and a change from the former circuit rider type, it is all the more interesting to note the enthusiasm of those attending the new symposium programs. Discussions have been extremely good and in practically every instance, those doctors that have attended the meetings have been complimentary of the type program, the instructors and the general presentation of the material. As usual, the attendance has not been up to par. The symposium postgraduate education program needs the support of all doctors. The sessions are planned for the help and benefit of all specialties. The 1956 program is an outstanding one. Support your Committee and State Medical Association by attending these courses when they are presented in your home district.

Results of Survey of Membership on National Legislative Issues

● In February, the Committee on Public Policy and Legislation distributed a survey form to the membership asking the opinion of doctor members relative to several very important legislative issues on the national level. A total of 2438 questionnaire forms were forwarded to the membership and 1243 replies were received.

Following is a tabulation of the survey with the vote shown immediately following the question that was asked on the survey form.

Results Revealed

● I FAVOR COMPULSORY SOCIAL SECURITY FOR PHYSICIANS.
YES 90 NO 973 NO REPLY 194
I FAVOR VOLUNTARY SOCIAL SECURITY FOR PHYSICIANS.
YES 831 NO 301 NO REPLY 90
DO YOU FAVOR PASSAGE OF H.R. 7225 SOCIAL SECURITY AMENDMENTS PROPOSED?
YES 65 NO 802 NO REPLY 317
I FAVOR THE JENKINS-KEOGH TAX POSTPONEMENT BILLS NOW IN CONGRESS, PROVIDING BY LAW FOR VOLUNTARY RETIREMENT PENSION PLAN FOR THE SELF-EMPLOYED.
YES 924 NO 157 NO REPLY 162
WE ASKED THOSE REPLYING TO THE SURVEY TO CIRCLE THE AGE BRACKET THEY WERE IN.

UNDER 35	189	35-44	391
45-54	252	55-64	137
65 & OVER	122		

Public Service

THE TENNESSEE TEN

Armed Services May Commission Osteopaths

● If prompt action is not taken by the American public, osteopaths may soon be made commissioned officers in our armed services.

H.R. 483 passed the House of Congress last session. The bill would authorize the Armed Forces to commission osteopaths.

Spokesmen for osteopathy are able to cite various state court decisions as evidence that osteopaths are qualified to care for patients. Testimony by Doctors of Medicine, however, draws an entirely different picture.

Dr. James R. McVay, AMA Trustee, pointed out that unlike civilians, armed forces personnel are not free to select the type of medical care they desire. Commissioning osteopaths would endanger the health and welfare of military personnel, he added, and would unnecessarily hinder use of civilian consultants and other civilian physicians by the armed services.

Latest figures show that if this law is passed, about 4,000 osteopaths will be available for service under the doctor draft.

All physicians,but particularly those who have served in the armed forces, should contact Senator Estes Kefauver and Senator Albert Gore, Senate Office Building, Washington, D. C., without delay. Senator Stuart Symington (D.-Mo.), is chairman of the Senate Armed Forces Sub-Committee considering the bill. Acquaintances outside the profession who are veterans of the armed services should be immediately made aware of the dangers inherent in H.R. 483 and urged to write their senators, and register protest with any veteran's organizations in which they hold membership.

Arguments Against H.R. 483

● Some arguments against the law are: (1) Commissioned osteopaths would be most likely to remain in the service. They would advance in rank and influence, and by so doing, possibly gain control of medical treatment for all our armed forces; (2) The nature of medical care for armed forces personnel is such that most surely the occasion would arise when the only medical officer available during a dire emergency would be a commissioned osteopath; (3) The morale of service personnel, particularly officers, would be severely damaged by this law. The already difficult problem of getting career personnel for the military would be made even more difficult by the implementation of patient care such as this bill would authorize.

Socialism at Home

● With their attention constantly being drawn to the steady advance of socialism elsewhere over the world, Americans are sometimes slow to recognize its inroads here at home. Indeed, the very terms of the encroachment are disguised in a language as deceptive as it is insidious.

"Social security," with all its humanitarian connotations, with its promises of freedom from anxiety for the

aged, and its expressed desire to care for the lame, the halt, and the blind, is a terrible opponent. To explain that expansion of our present social security laws under the provisions of H.R. 7225 will slip the noose about the neck of medical practice as we know it today, and hang it like a criminal, until dead, is an almost impossible task. Yet, this is most assuredly the case.

The defeat of those interests which would bring medicine and industry under public ownership will require a devotion and determination on the part of its opponents to a greater proportion than that possessed by the fanatics who are laboring constantly under the deceptive banners of "human rights", "liberty", "equality", and "justice" to trample freedom down and banish the rights of the individual.

The first goal on the slate of socialism is the abolition of local control, the circumvention of state governments, and the centralization of property ownership under government power. The socialists sometimes openly advocate the use of force to achieve these ends.

Hence the term "police state."

But before the socialists can seize control they must first render helpless all manifestations of individual thought and individual freedom. Their obvious weapon is fear. Less obvious means at their disposal are the promulgation of a feeling of guilt over supposed social injustices, publicly smearing leaders who oppose them, inciting demonstrations of violence, creating martyrs by whatever means at hand, and with ruthless disregard for the individual, spreading false, malicious rumors aimed at the distortion of public opinion.

Others Have Suffered Too

● The medical profession is not the only group which has suffered at the hands of these people. The medical profession is one of the few groups, however, which realizes what is happening. It therefore behooves the profession to join hands with other opponents of socialism, to fight for the preservation of freedom on all fronts, and not just in the area of medical care. The individual and collective efforts of 2,400 doctors in Tennessee can go far to provide the leadership and encouragement which the people now need in order to make their true feelings and opinions known. The collective efforts of doctors all over the United States play a large part in holding the line against socialism in this country. It may well be that the American doctor, imbued with the tenets of Hippocrates and inspired by the heritage of the frontier, will be a major factor in the struggle to preserve individual freedom, along with the free-enterprise practice of medicine, and the freedom to engage in competitive business enterprise after the American tradition.

8:45 A.M.

Cadet Room **Hotel Peabody**

Membership Business Meeting

Election of Board of Directors and Officers

WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION

WEDNESDAY, APRIL 11, 1956

9:00 A.M.

Registration—Main Lobby

10:00 A.M.

Post-Convention Board Meeting—Room 215, Hotel Peabody

SPECIAL MEETINGS AND ANNOUNCEMENTS

President's Night Banquet

Monday, April 9—7:00 P.M.

Continental Ballroom, Hotel Peabody

Charles C. Trabue, IV, M.D. President, Presiding.

Guest Speaker—F. J. L. Blasingame, M.D.

Introduction of President-Elect—R. B. Wood, M.D.

Special Awards:

Presenting Tennessee's Outstanding General Practitioner by Robert N. Buchanan, Jr., M.D., Speaker of the House of Delegates.

Woman's Auxiliary to the Tennessee State Medical Association

April 9, 10 and 11, 1956 Hotel Peabody

Monday, April 9

Registration 9:00 A.M.

1:00 P.M. Preconvention Luncheon and Board Meeting Room 215

7:00 P.M. President's Night Continental Ballroom

Tuesday, April 10

9:00 A.M. General Session Georgian Room

12:30 P.M. Installation Luncheon Memphis Country Club

Wednesday, April 11

10:00 A.M. Post Convention Board Meeting Room 215

Members may register each day beginning at 9:00 a.m. at the registration desk located in the main lobby.

Public Health Council

The Public Health Council will meet in Room 214 of the Peabody at 10:00 a.m. on Monday, April 9. Luncheon will be served at Noon and a Business Session will be held immediately following lunch.

Board of Trustees

The Board of Trustees will meet in Room 212 of the Peabody at 9:00 a.m. on Wednesday, April 11.

Tennessee Medical Foundation

A membership meeting of the Tennessee Medical Foundation will be conducted, beginning with a "dutch" breakfast in the Cadet Room of the Peabody at 8:00 a.m. Wednesday morning, April 11. All members of the Foundation are invited to attend.

Public Service Committee Meeting

Monday, April 9—12:00 Noon

The Public Service Committee will hold a luncheon meeting on the third floor in one of the Sample Rooms at the Peabody at twelve noon on Monday April 9. A business meeting will follow. All committee members are urged to attend.

TENNESSEE STATE PEDIATRIC SOCIETY SOCIAL PROGRAM

Chairman: Mrs. Charles Householder

SUNDAY, APRIL 8, 1956

6:30 P.M. Ridgeway Country Club
Social Hour—followed by a Buffet Dinner at 7:30 for members of the Tennessee Pediatric Society and their wives.
Courtesy Plough Chemical Inc.

MONDAY, APRIL 9, 1956

12:30 P.M. University Club
Luncheon and Fashion Show for the ladies. Fashions by Julius Lewis. Transportation provided—leaving Hotel Peabody at 11:30 A.M. (automobile entrance).
Hostesses: Wives of Members of Memphis Pediatric Society

6:30 P.M. Hotel Peabody—Louis XIV Room
Social Hour, followed by Banquet at 7:30, for members of Tennessee Pediatric Society and their wives.

TUESDAY, APRIL 10, 1956

10:30 A.M. Le Bonheur Children's Hospital
Meeting for Members of American Academy of Pediatrics

12:30 P.M. University Center
Luncheon for Doctors

DEATHS

Dr. Benjamin Irving Harrison, Sr., 64, Knoxville, died January 29th at Fort Sanders Hospital.

Dr. Walter Luttrell, 88, Knoxville, died February 11th at General Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Sullivan-Johnson County Medical Society

The meeting of the Society was held at the Ridgefields Country Club, Kingsport, on February 2. Dr. H. H. Bradshaw, Professor of Surgery, Bowman-Gray School of Medicine, presented a paper on "Treatment of Gastric and Duodenal Ulcer." The Society voted to select and promote a candidate for the honor of general practitioner of the year, sponsored by the Tennessee State Medical Association.

Nashville Academy of Medicine and Davidson County Medical Society

The Society met for its regular February dinner meeting at Vanderbilt University Hospital. The scientific program consisted of a paper entitled "Some Points in the Diagnosis and Treatment of Arterial Anuerysms" by Dr. James A. Kirtley, Jr. The second paper entitled "Skin Planing in the Treatment of Acne Scars" was presented by Dr. Bernard J. Pass.

Knoxville Academy of Medicine

The Society met on February 14th in the Knoxville Academy of Medicine. The scientific program consisted of a paper entitled "Surgical Management of Peptic Ulcer" by Dr. G. Turner Howard. The paper was discussed by Dr. Joe I. Garcia and Dr. John Hall. An interesting case report was given by Dr. C. Harold Dabbs.

Chattanooga-Hamilton County Medical Society

Members of the Society met on February 2nd and heard three interesting papers. "Eczema of the Hands" was presented by Dr. Robert Thompson, "Cobalt Radiation" was presented by Dr. John Crowell and a case report was rendered by Dr. W. Houston Price.

Dr. Gene H. Kistler was named President-Elect of the Society to succeed Dr. J. B. Phillips, deceased. Under the Society's Constitution and By-Laws, Dr. Kistler will assume the Presidency in January, 1957.

Five County Medical Society

The Five County Medical Society met in Sparta on January 19th at the Hillcrest Drive-In. The scientific program was presented by Dr. James Prose, Knoxville, who gave a paper entitled "Gall Bladder Surgery and Its Complications." Dr. Gene Cravens, Resident at Knoxville General Hospital, accompanied the speaker.

Memphis and Shelby County Medical Society

At the meeting of the Society on January 3, a short address was given by the incoming President, Dr. Samuel L. Raines. The scientific program consisted of: "Management of Hypertension in Acute Nephritis," by Dr. J. N. Etteldorf; "Endometriosis in Laparotomy Scars," by Dr. R. Luby Jones; and "Indiopathic Hypoparathroidism Stimulating Epilepsy and Brain Tumor," by Dr. Maurice E. Waller. Seventy-nine members were present.

Sumner County Medical Society

Dr. R. W. Simonton, Jr., Portland, was elected President of the Society at its meeting on January 10th. Others elected were Dr. Walter H. Stevenson, vice-president and Dr. J. A. Quillian, Secretary-Treasurer.

Warren County Medical Society

Members of the Warren County Medical Society met on January 23 in McMinnville. The Society named a three-member Board of Censors and Grievance Committee. Following dinner and a short business session, a movie on burns was shown.

Roane County Medical Society

The Society held its regular meeting on January 31st at the Oak Ridge Hospital. The program consisted of a talk on the Clinical use of Radio-Iodine. The talk was followed by election of officers.

Consolidated Medical Assembly

The members of the Assembly held its regular meeting on February 7 at the Western State Hospital at Bolivar. The program consisted of addresses by two members of the Gailor Psychiatric Hospital staff, University of Tennessee School of Medicine. Dr. Don Winfield discussed "Practical Aspects of EEG," and Dr. T. S. Hill "The Status of Psychiatry and Where Is It Going?" Dr. Edward Levy, Superintendent of the hospital, was host to the group.

NATIONAL NEWS

Hope Seen for Tax Relief On Retirement Savings

Will this be the year that doctors get tax relief on retirement savings? "An informal survey of Washington policy makers reveals a good deal of cautious optimism on the subject," reports MEDICAL ECONOMICS in its February issue. "There's real steam, in both Administration and Congressional circles, behind the idea that self-employed doctors and others are now treated unfairly taxwise when they put aside money for their old age."

Up for consideration by Congress are the Jenkins-Keogh bill and a substitute known as the Ray bill. Under the Jenkins-Keogh bill, doctors would be allowed to put 10 percent of their earned net incomes, "up to an annual maximum of $5,000, into a privately managed retirement fund." They could set aside as much as $100,000 in a lifetime.

At 65, the physicians could take out their savings in one lump sum or in regular installments. If withdrawn the first way, the money would be taxed as capital gain. If taken out in installments, it would be subject to regular income tax rates; but by then, the doctors would be in lower brackets.

Just what are the chances of the Jenkins-Keogh bill's being enacted? Rep. Eugene J. Keogh (D., N. Y.) is quoted as saying: "It is difficult for me to state categorically what the chances are. . . . I propose, however, to utilize every parliamentary maneuver to accomplish this objective."

More outspokenly hopeful is Frank G. Dickinson, director of the A.M.A. Bureau of Medical Economic Research. "Frankly," he says, "our chances this session are better than fifty-fifty."

Insurance Plan Stressed in Dependent Care Bill

Military dependents medical care bill introduced in House in January puts emphasis on prepaid health insurance. While it does not compel servicemen to enroll, HR 7994 (now 9429) contains certain language prejudicial to alternate choice,—military medical and hospital facilities. Uninsured dependents preferring this type of care have no guarantee it will be available when they need it, in contrast with insurance plan in which civilian doctors and hospitals would furnish services. Defense Department would be authorized to levy charges for outpatient care in military facilities, something which has never been done before.

Another significant point, in this connection: Uninsured dependents unable to gain admittance into a military hospital, due to lack of space, personnel, etc., would have no legal claim for reimbursement of expenses incurred. Defense Department's previous dependent care bill (HR 7792) authorized government payment of civilian physicians and hospitals in cases of this kind; HR 7994 contains no such provisions.

This replacement measure specifies that serviceman shall contribute (by payroll allotment) 30 percent of health insurance premium for coverage of spouse and children. If he also elects similar coverage for dependent parents or parents-in-law, he will bear its full cost. Basic coverage comprises diagnosis, treatment of acute medical and surgical conditions, treatment of contagious diseases, immunizations and maternity/infant care. If more comprehensive benefits are desired, full amount of extra premium cost is to be borne by serviceman. If insured dependents receive care in military installations, latter shall be reimbursed by carrier. No dental services are authorized, except those of emergency nature or as necessary adjunct to medical or surgical treatment.

MEDICAL NEWS IN TENNESSEE

Institute on Personal Injury Cases

Invitations went out over a ten state area for a medicolegal institute on personal injury actions to be presented March 1-2 in Memphis by the University of Tennessee Law and Medical Colleges under joint sponsorship of the Shelby County Medical Society and Bar groups in Shelby County.

The Institute at the Peabody Hotel was one of the biggest in the 20 year history of the U. T. Law Institutes. The program featured panel discussions in layman's language on medicolegal problems faced daily in trial practice. Distinguished visitors on the program were Melvin M. Belli of the San Francisco bar; Alva Brumfield of the Baton Rouge bar; Truman Rucker of the Tulsa bar, and Emile S. Berman of the New York bar.

Heart Clinic Established at Knoxville

Establishment and operation of Tennessee's and the Mid-South's first Cardiac Work Evaluation Clinic, the Heart Association's answer to the problem of returning the heart patient to work, has been announced by Dr. Joseph Acker, of Knoxville, chief and founder of the clinic. "The Cardiac Work Evaluation Clinic is a part of the answer to this problem," Dr. Acker said, "and our experience in Knoxville indicates the facility has been well worth the time and money spent in its establishment."

While heart specialists are concerned primarily with diagnosis and treatment, Dr. Acker explained, the CWEC is interested primarily in the occupational potentialities of its patients. Attention is focused on the patient's ability rather than his disability, and there is careful investigation of his vocational experience and training, as well as his emotional, social and economic adjustment to his heart disease.

Shortage of Physicians in Bradley County

According to tabulations, there is a practicing physician for every 1,040 persons in Bradley County. This figure, according to research of Dr. Willard C. Rappeleye, of

Columbia University's medical faculty, actually shows a doctor shortage in Cleveland. The average is a doctor for every 750 persons.

District Meeting of American Academy of Obstetrics and Gynecology

Important clinical problems in obstetrics and gynecology were discussed when the Society held its annual district meeting. March 9-10 at the Peabody Hotel in Memphis. This was the first time the District Meeting has been held in Memphis. Eminent specialists and men in hospital residency training were speakers. Some 500 physicians from nine states were in attendance. The Memphis Obstetrical and Gynecological Society were host.

Vanderbilt University, School of Medicine

A $166,000 grant from the John A. Hartford Foundation has placed Vanderbilt Hospital among the top heart research centers in the South. The grant is for a two-year period and will be used for clinical study in diagnosing and treating diseases which injure the heart, blood vessels and circulation, and for patient care.

The objectives for which the grant will be used are: further development of methods for diagnosis and treatment of congenital heart diseases and structural abnormalities in the blood vessels; the application of new techniques for the detection and relief of coronary artery disease and heart muscle damage; determination of the role of infection, kidney disease, pregnancy and abnormal hormonal balance in causing heart and blood vessel diseases; search for new and effective drugs and the improvement in methods for treating the patient with symptoms of edema, hypertension, cardiac failure, impairment of the function of the blood vessels of the lungs and thrombosis; and investigation into the cause and prevention of congenital heart diseases.

University of Tennessee College of Medicine Postgraduate Course in Gastroenterology

This course will be under the direction of Dr. I. Frank Tullis, of the Division of Medicine, with active participation by representatives from the Departments of Surgery and Radiology. The program will consist of lectures, panel discussions, case presentations, ward rounds and special clinics. The principal gastrointestinal disorders will be adequately covered with emphasis on diagnosis and management of such problems in the everyday practice of medicine. Special techniques, such as proctosigmoidoscopy, will be demonstrated, and physicians enrolled in the course will participate in the examination of selected patients.

In order to provide appropriate informality and to permit individual instruction, enrollment will be limited to 20 physicians. The course is approved for credit by the American Academy of General Practice.

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Appointments to the staff and the promotion of four of the faculty have been announced. Appointed assistants were Dr. Elmer W. Sydner, Jr., and Dr. Stephen A. Pridgen, Department of Surgery; and Dr. John L. Hobson and Dr. Earle U. Scharff, Division of Internal Medicine. Promoted from instructor to assistant professor were Dr. R. F. Ackerman, Division of Preventive Medicine; and Dr. C. D. Hawkes, Department of Surgery. Advanced from assistant to instructor in the Department of Dermatology were Dr. Fox Miller and Dr. J. W. Baird.

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The National Fund for Medical Education has awarded $41,715 to the University of Tennessee College of Medicine. The award includes $15,000 presented by the fund to each of the medical colleges in the nation, and a contribution of $24,060, based on $30.00 per student, or a total of 802 students.

The National Fund for Medical Education is made possible by large contributions from industries, business men and physicians.

Cowan Seeks Medical Clinic

Joint Committees of the Cowan Commercial and Rotary Clubs are forming plans for establishment of a $30,000 medical clinic, a major move in securing a physician for the community. The clinic is to have limited accommodations for overnight patients and will include office space for a physician. Spokesmen say that $8,500 of the amount needed has been pledged.

PERSONAL NEWS

Dr. Jean Slate has joined the Madison Associated Physicians at Madison College. Practice is limited to Obstetrics and Gynecology.

Dr. John E. Sullivan, Knoxville, has been appointed East Region Chairman for the American Cancer Society.

Dr. Robert E. Mabe, Chattanooga, has become a partner in the firm of Drs. Newell and Newell & Associates.

Dr. Paul Shakespeare, Cowan, has moved to Nashville to accept a residency in surgery at Vanderbilt Hospital.

Dr. Cecil Lowe, Cleveland, has received a certificate as specialist in general surgery from the American Board of Surgery.

Dr. William MacGuire, Jr., Chattanooga, recently spoke before a Church group in the Hotel Patten.

Dr. Stewart P. Smith, Chattanooga, has announced the formation of the Smith Pediatric Center in Chattanooga. **Dr. Robert E. Ivy** has moved to Chattanooga to be associated with Dr. Smith in the practice of pediatrics.

Dr. Hugh Edward Green, Carthage, has joined Dr. Gordon Petty at the Petty Clinic, for the general practice of medicine.

Dr. Jack Adams, Chattanooga, was the recent speaker at Lee College.

Dr. Beverly T. Towery, Nashville, has been named Professor of Medicine and Chairman of the Department of Medicine at the University of Louisville, effective in July.

Dr. James C. Overall, Nashville, has been elected Chairman of the Board of Directors of the Nashville Academy of Medicine.

Dr. Foster Hampton, Jr., Chattanooga, was a recent speaker on "Your Doctor Speaks" program over television.

Dr. Joseph Acker, Jr., Knoxville, was the guest speaker at the Chattanooga Area Heart Association recently.

Dr. Ralph Braund, Memphis, recently spoke before the Cured Cancer Club.

Dr. Hollis E. Johnson, Nashville, recently spoke to the State Cancer Society in Nashville.

Dr. Edwin W. Cocke, Jr., Memphis, recently spoke before the American College of Surgeons at a regional meeting in Philadelphia.

Dr. Norman G. Patterson, Bristol, spoke to the Junior Gibbon Study Club.

The following Springfield doctors recently participated in a series of nightly radio talks on heart trouble. They were: **Dr. C. M. Looney, Dr. W. P. Stone, Dr. J. E. Wilkinson** and **Dr. John Jackson.**

BOOK REVIEW

Hand Surgery in World War II. Edited by Sterling Bunnell, M.D., Office of the Surgeon General, Department of the Army, Washington, D. C. Supt. of Documents, U. S. Government Printing Office. Price $3.75.

This book is filled with information which is of historical interest and it also contains a vast array of basic information regarding the treatment of hand injuries. World War II marked the development of a highly specialized and vigorous approach to the care of injuries of the hand. There were developed overseas and in the Zone of the Interior, special centers for the care of patients with hand injuries. The surgeons who participated in this work are now the active leaders in the field of Hand Surgery. Their experiences have been made available in this book, with a section devoted to the development of new concepts in each of the centers and a highly informative chapter on the conclusions which were reached by Dr. Bunnell as civilian consultant.

In any new specialty field it is not uncommon to find the surgical techniques understood better by those who have participated in its development than by second generation workers who have learned part of the total concept. This is true of hand surgery today. This book will, therefore, go a long way in making it possible for every student of hand surgery to have a concise reference and summary of the field as it existed at the time which will probably be considered, in later years, as the beginning of its full development. Further progress in some details may have been made since World War II, but this book will be recognized as a significant contribution to surgical literature and will be of interest to all those who are working in the field of hand surgery whether they be accomplished surgeons or beginning residents.

J. W. Hillman, M.D.

ANNOUNCEMENTS

Surgeons to Hold Southeastern Regional Meeting in Chattanooga

The U. S. Section of the International College of Surgeons will hold a Southeastern regional meeting in the Read House, Chattanooga, April 30 and May 1.

The program will include the presentation of 17 scientific papers, three panels, dinner and luncheon with speakers and exhibits.

Dr. William G. Stephenson of Chattanooga, regent for Tennessee and general chairman of the meeting, will preside.

Dr. Max Thorek of Chicago, founder and secretary general of the International College of Surgeons, and Dr. Ross T. McIntire, Chicago, executive director, will be the banquet speakers on the evening of April 30. The luncheon that day will be addressed by Dr. Arnold S. Jackson, Madison, Wis., president of the U. S. Section, and Dr. McIntire.

Subjects and authors of the scientific papers will be:

Carcinoma of the Colon—Curtice Rosser, Dallas.

Indiscriminate Use of Hormones—Gilbert F. Douglas and William W. Douglas, Birmingham.

Fractures of the Hip—Eugene L. Jewett, Orlando, Fla.

Modern Treatment of Peripheral Vascular Disease—Eugene L. Lowenberg, Norfolk.

Injuries to the Urinary Tract Following Pelvic and Abdominal Surgery—Park Niceley, Knoxville.

Abdominal Pain Patterns—Karl M. Lippert, Columbia, S. C.

Excision of the Cul-de-Sac of Douglas for the Surgical Cure of Hernia—Richard Torpin, Augusta.

Management of Traumatic Wounds—Neal Owens, New Orleans.

Hernias—Lawrence W. Long, Jackson, Miss.

Surgical Aspects in Protein Malnutrition—W. R. Bond, Richmond.

Diagnosis and Surgical Treatment of Aneurysms—Converse Peirce II, Knoxville.

Surgery in Infancy—M. K. King, Norfolk.

Gracilis Muscle Transplant Operation for Correction of Incontinence—Kenneth P. Pickrell and Nicholas Georgiade, Durham, N. C.

Operative Cholangiographic Demonstration of Biliary Tract Pathology—J. O. Morgan, Gadsden, Ala.

Problem Cases—Lloyd J. Melto, West Palm Beach, Fla.

Treatment of Fractures by Fixation—Leslie V. Rush, Meridian, Miss.

Isotopes—Speaker to be announced.

There will be three panels—on gall bladder disease, surgery of the thyroid and surgery of the stomach. The moderators will be Dr. Moses Behrend, Philadelphia; Dr. Arnold S. Jackson, Madison, Wis., and Dr. Claude J. Hunt, Kansas City, Mo. Each panel will have from four to five participants.

For details, write Dr. William G. Stephenson, 546 McCallie Avenue, Chattanooga 2, Tenn.

American Board of Obstetrics and Gynecology

The next scheduled examinations (Part II) oral and clinical will be conducted at the Edgewater Beach Hotel, Chicago, Ill., May 11-20.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations.

American College of Chest Physicians

The meeting of the American College of Chest Physicians will be held at the Hotel Sherman, Chicago, June 6-10. Examinations for Fellowship in the College will be held on Thursday, June 7. All interested physicians are invited to attend. There is no registration fee.

American College of Allergists

The 12th Congress and Graduate Instructional Course in Allergy of the American College of Allergists will be conducted in the Hotel New Yorker, New York City, April 15-20, 1956.

Information on Stipends Offerd by the Tennessee Department of Mental Health

Any student in psychiatry, psychology, psychiatric nursing, psychiatric social work (casework and group work), recreational therapy, hospital administration, or in any other field related to the prevention and treatment of mental illness may apply.

Students ordinarily will not undertake specialized training relating to mental health before they reach the graduate level. However, there is no strict rule with respect to this. The student may attend the school of his choice, provided, of course, that it is an accredited, reputable school.

Stipends may be awarded for a period of three months, one year, three years, or whatever period of time is required for the student's completion of his program of studies. This will depend on the year and field of training.

Applications are accepted at all times. However, early submission of applications is recommended, due to the limitation of available funds, which may be exhausted. Request an application form by writing to: C. J. Ruilmann, M.D., Commissioner, Department of Mental Health, 300 Cordell Hull Building, Nashville, Tennessee.

The amount of each stipend depends on the circumstances and individual needs of each student. Such matters as the field of study, family responsibilities, tuition costs, other income, etc., are taken into consideration. Generally speaking, the stipend is intended to cover all reasonable expenses while attending school. The majority of trainees, exclusive of psychiatric residents, are receiving between $100 and $200 a month. Larger grants may be awarded, however.

The student agrees to accept employment at one of the mental hospitals or psychiatric clinics under the jurisdiction of the Tennessee Department of Mental Health for a period of time equal to that during which he receives assistance from the Department. Normally such employment will commence upon completion of the student's training. Exceptions for justifiable reasons will be considered, however.

Tennessee Chapter—American Academy of Pediatrics

The Tennessee Chapter of the American Academy of Pediatrics will hold its second annual business meeting in the amphitheater of Le Bonheur Children's Hospital at Memphis, Tennessee, Tuesday, April 10th, at 10:30 A.M.

This meeting will precede the luncheon and afternoon scientific session of the Tennessee Pediatric Society.

All members as well as other Academy members who are eligible for membership in the state chapter are urged to attend.

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THE ROLE OF ORGANIZED MEDICINE IN MODERN AMERICA*

F. J. L. BLASINGAME, M.D., Wharton, Texas

Mr. President, Fellow Physicians, and Friends:

It is a distinct pleasure to visit again in Tennessee. As a neighbor from Texas, I feel close to you. The people of our respective states have had much in common over the years. Your Tennessee State Medical Association is an important part of organized medicine. I bring you greetings from fellow physicians in Texas and from others across the remainder of our nation. Your Board of Trustees of the American Medical Association is now in session in Washington, D. C.; and I came today from that meeting and bring you their felicitations and best wishes. Even beyond our land, you are part of the world-wide fraternity of medicine in many countries by way of the World Medical Association through which approximately 700,000 physicians are represented. Medicine speaks a universal language and is an effective instrument in promoting international understanding.

It helps us to take heart and stimulates us to realize that we belong to something bigger and beyond our immediate boundaries.

The Long-Range View

I count this occasion important, and I am honored to be here and share it with you. Removed from our singular and personal responsibilities, as if withdrawn into these delightful surroundings for a pause, let us use this brief opportunity to "reason together" and to reflect objectively. In so doing, perhaps we can gain a better perspective of some of our problems and review the passing scene from a long-range point of view. For whatever it may be worth, let us tonight disregard the trials and tribulations of which we hear daily and consider instead the future. Let us concern ourselves not with the waves and the ripples but with the tides.

With this point of view in mind, I venture to estimate that the role of organized medicine in the modern America is of paramount importance and of vital significance to every physician and to all other citizens.

Restlessness, Change, Awakening

Though he dreams of peace, quiet, and security, by his very nature man is restless, and his desires are insatiable. When will he be satisfied? The answer obviously is: *Never.*

This restlessness leads to change which is universal. The *rate* of change increases, and the day-to-day movement of human affairs is faster in our lifetime than at any time in the past.

While parts of the world may differ on the definitions of purpose, it appears that there is a general awakening of men to greater expectations. Someone has said that men are slowly coming to the recognition of the Dignity of Man.

Economy of Abundance

Technological advances are having a telling effect, and applied science is gradually freeing man from poverty. Horsepower is replacing muscle power. Steam and combustion engines, the busy kilowatt, atomic energy, and now dreams of harnessing the rays of the sun,—these accomplishments give reality to an economy of abundance. In fact, such changes have been so abrupt and man has for so long thought in terms of poverty and subsistence that he now appears to have some difficulty in finding the grace and the intellect to cope with these new deliverances.

*Presented by the guest speaker, member of the Executive Committee of the Board of Trustees of A.M.A., at the President's Night Banquet at the 121st Annual Meeting of the Tennessee State Medical Association, April 9, 1956, Memphis, Tenn.

The concept is gaining acceptance that an economy of abundance can be created. Man is organizing in various patterns over the world to try to satisfy his wants, and is being exploited here and there by despots and politicians. But, civilization has come a long way. Consider the days of the Roman Empire which numbered about 50,000 people; about one-third of these were slave laborers, others lived in poverty and ignorance; and all of its people were doomed to an early death. I understand that life expectancy at birth in the days of Julius Caesar was about 18 years.

Government and Freedom

Even though social organization has been a necessity, men have been slow and clumsy in creating a satisfactory government. Of government, William E. Gladstone, the great British statesman, is reported to have remarked that it is the saddest chapter in human history. Perhaps this point of view is pessimistic.

To say the least, such organization with freedom of the individual has been a tedious task. Benjamin Fairless once estimated that less than 15 per cent of the men who have inhabited this earth have lived in an atmosphere of freedom; but freedom has been vindicated by faith and tested by experience. Freedom of the individual has allowed the use of his talents and brought him abundant satisfactions. Freedom has stimulated the production of goods and services. Sufficient numbers of men have tasted freedom and proved its worth, and it will be preserved in social organization. Dark days will come, such as we see in certain areas of the world today, but these days will clear. I think we must agree that Henry R. Luce put it well when he wrote, "Organization with freedom, however untidy, is in every way superior to organization by tyranny, however benevolent." Since government in the last analysis is but a reflection of the will of those governed, let us hope that, as the individual expands his expectations and as he becomes more capable of using freedom creatively, he will demand more of it.

The Great Debate

We are witnessing a titanic living debate over the fundamental purpose of government. As Americans, we need to examine ourselves to see if we heartily subscribe to the proposition that government exists primarily to give an atmosphere of freedom in which the individual may develop and exercise his talents. To a serious degree, Americans are failing to sell this idea widely over the world.

Communism cannot be combatted by foreign aid; we cannot buy the minds of men. They must be challenged with genuine purposes and durable values. The battle is not simple. Firm in their convictions, Americans must continue to respect man as the image of God. Americans must extol the values of a free individual with a deep sense of responsibility, who is willing to live in a daring fashion to try to make the most of freedom. What manner of living could be more challenging and positive?

Sir Winston Churchill recently remarked that communism had already lost the respect of mankind. While he undoubtedly is correct, taking a long look, there remains much basis for concern over the number of peoples of the world who yet live under communism where there is much darkness, fear, and slavery.

Certainly, the implication must not be left that all is well today within our nation. It has been toying with socialization. It has abridged a few freedoms, especially in the economic field. It has its problems, its headaches, a little indigestion, its chills and fevers, but its general health is good. However, it has a good constitution, and its expectancy is excellent.

America exhibits the best example of an applied technocracy in an atmosphere of freedom. The result in output amazes us and the remainder of the world. Growth in population, increase in longevity, and the expansion of desires and expectations of the average citizen have vastly extended the consumption of goods and services. Though still inadequate, modern education, coupled with the mass distribution of goods and rapid exchange of ideas by press, radio, television, and travel, has multiplied desires and created appetites. The average citizen has added new values, thus increasing his ability to consume. Of such is the

picture of our expanding economy; out of such comes the more abundant life.

What of Medicine?

In this expanding pattern of social organization, medicine is important. It is deeply woven in the fabric of things now and those to come.

These greater expectations of men call for more years, more health and vigor, less pain and fear. The group and the individual are fascinated in the hope of a better and longer life. Medicine is news because medicine is important to the individual and to this country—in fact to the world.

Progress in the health field has on occasions been so dramatic, and so often associated with important political consequences that our economy and our very philosophy have had difficulty in adjusting to it.

Medicine's Public Policy

Much could be said in praise of Medicine's public policy. It is simple and can be summarized by saying that Medicine subscribes to and supports a policy which is in the public interest, assuming always that that policy which benefits the public is also good for Medicine. The Oath of Hippocrates and the Code of Ethics are outlines of conduct becoming a physician in his relation with other doctors of medicine and with his patients. These standards gain their real strength and moral value from the fact that they are in the direction of effective, sound medical care of the patient. Much propaganda to the contrary, Medicine has the respect and confidence of the vast majority of mankind, despite what one might infer from the loudness of the minority.

In items medical, society has a right to look to our profession for leadership and guidance. Our social organization is highly competitive, as it should be. Lacking leadership and direction from men of medicine, society may turn from time to time elsewhere for advice in medical affairs. Though well intended, it may be ill-advised, and damaging consequences may result.

Times are not what they used to be! And they never will be! Change is ever with us. Let us offer leadership.

It is here that organized medicine can be of service. It is in the public interest, and becoming to our profession, that informed physicians be ready at all levels of government to offer assistance, guidance, and advice. Ready information in the health field must flow to all of society, if its members are to keep informed and to know the offerings of medicine and its benefits.

Finally, let me speak of leadership in another sense. "Men do not live by bread alone." As devoted physicians with special knowledge and skills, it is in the realm of the spiritual values that men of medicine have an opportunity to help to give a richer meaning to life, to assist in wiping away ignorance and superstition, and in propagating understanding and insight.

The greatest satisfactions in our growth as physicians come in constant self-improvement and increasing our allegiance to honor, charity, and excellence. In so doing, satisfactions are added unto us as we live this sort of life, and the effect is a higher quality of medicine as applied.

By any reasonable yardstick, Charles F. Kettering must be measured a man of great energy, insight, and vision. He gave this appraisal of civilization: "We are just at the beginning of progress in every field of human endeavor."

We can look back with some degree of satisfaction and pride at the progress in medicine, especially over the last half century. But, even so, we shall have to admit that Mr. Kettering's hopeful estimate quite likely applies accurately to medical science and its role tomorrow in human affairs. I share in the feeling that the future will be better than the past and that an era of challenging promise lies ahead.

In conclusion, it is my hope that this brief interlude shared together may serve to increase our expectations and to quicken our spirits that we may be refreshed in our day-to-day labors.

One of the causes of syncope may be hypersensitivity of the carotid sinus. The cases in this report develop the clinical picture, the diagnosis and treatment.

CAROTID SINUS SYNCOPE

LAURENCE A. GROSSMAN, M.D.,* Nashville, Tenn.

Episodes of unconsciousness may result from hypersensitivity of the carotid sinus. In persons thus afflicted the slightest stimulation may induce dizziness or syncope. The pressure of a razor in the area of the sinus, a tight collar, bending or turning the head in certain directions,—all are sufficient to initiate attacks. The rarity of the carotid sinus syndrome appears to be a reflection of insufficient diagnostic acumen rather than a true indication of infrequent occurrence. The following case reports illustrate certain interesting and practical aspects of this not uncommon but infrequently recognized condition.

Case Reports

Case 1. L. S., a 48 year old business man was examined on October 12, 1949. For 3 years he had experienced intermittent periods of dizziness and staggering. These "spells" occurred late in the day when he was tired. Often he had to sit down or lean against an object for support. The attacks resulted in nervousness and apprehension. On October 5, 1949, while in the barber's chair having a towel fastened around his neck, he suddenly lost consciousness and experienced a brief convulsive seizure.

The physical examination revealed early retinal arteriosclerosis. The blood pressure was 130/80. The other physical findings were normal.

Pressure on the left carotid sinus induced bradycardia, the heart rate falling from 80 to 58 beats per minute. Pressure on the right carotid sinus resulted in faintness followed by momentary loss of consciousness. A simultaneous electrocardiographic tracing (Fig. 1) disclosed a period of asystole lasting 5.4 seconds. This was followed by a single ventricular beat and a second interval of asystole lasting 2.5 seconds.

On October 21, 1949, the right carotid sinus was surgically denervated. Subsequently he has remained free of symptoms. Pressure on the right carotid sinus of the same kind and degree which previously produced periods of asystole does not result in slowing of the heart rate.

Case 2. E. L., a 35 year old aircraft company executive, was examined on March 28, 1950. He complained of recently acquired obesity and of dizzy spells. Careful inquiry revealed that as a rule the episodes of dizziness occurred at times when he wore a collar. Once he became very dizzy when he suddenly sat upright.

The physical examination was negative except for obesity. The blood pressure was 110/72.

Pressure on the left carotid sinus with the patient in the recumbent position caused slowing of the cardiac rate from 62 to 48 beats per minute. Light right carotid sinus pressure resulted in dizziness and a sensation of faintness without actual loss of consciousness and the electrocardiogram revealed a period of cardiac asystole lasting 5.4 seconds (Fig. 1), followed by ventricular escape, with the site of ventricular impulse formation either in the AV node or proximal to the bifurcation of the bundle of His.

Treatment with tincture of belladonna controlled most of the dizzy spells, but the patient continued to experience an occasional attack. Therefore, denervation of the right carotid sinus was performed. No further attacks have occurred. After operation stimulation of the right carotid sinus did not produce either bradycardia or change in blood pressure.

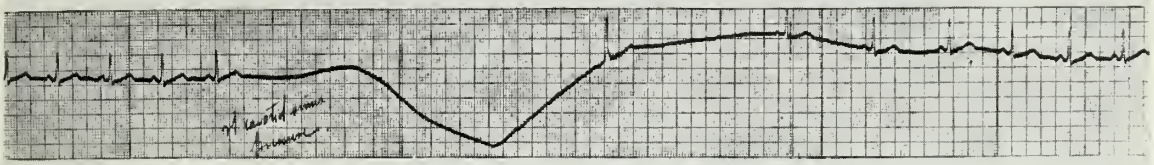
Case 3. T. M. H., a 38 year old salesman, was examined February 11, 1955. For one year he had experienced periods of faintness and dizziness. Concomitantly, there was epigastric fullness, a substernal "fluttering sensation," and numbness in the jaws. The attacks occurred every 2 to 4 weeks and lasted about 5 minutes. They were abrupt in onset and always took place during the day. He could not recall having an attack when he was not wearing a shirt with a collar. One week prior to examination, after stopping his car at a street intersection, he suddenly lost consciousness. He does not definitely remember turning his head to look in one direction or another.

In December, 1954, he was hospitalized elsewhere. X-ray examination of the gastrointestinal tract and many laboratory procedures did not disclose any abnormal findings and he states that he was considered "neurotic."

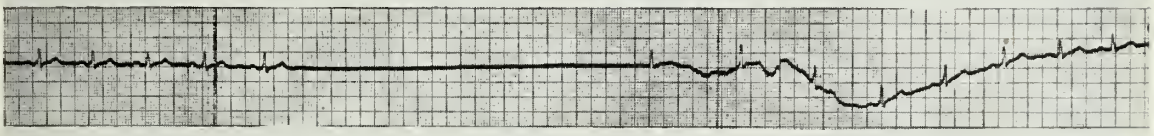
Examination in February, 1955, revealed a husky, muscular man whose blood pressure was 140/90, without significant postural variation. Tachycardia and occasional extrasystoles were present but all other findings on physical examination were normal.

The electrocardiographic tracing showed sinus arrhythmia with a rate of 100 to 115. Brief massage of the right carotid sinus resulted in asystole

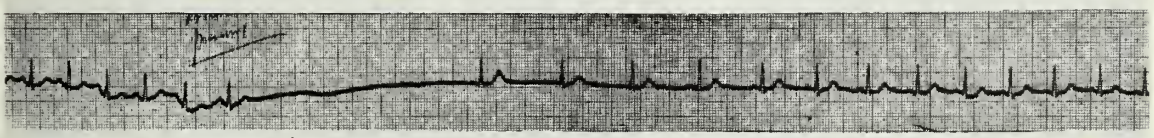
*From the Vanderbilt University School of Medicine, Nashville, Tenn.



CASE 1. Asystole of 5.4 seconds, o single ventricular beot, and further osystole of 2.5 seconds.



CASE 2. Asystole of 5.4 seconds followed by ventricular escape.



CASE 3. Asystole of 3.6 seconds with 3 nodal beats in the next 3 seconds.

FIGURE 1. – RIGHT CAROTID SINUS STIMULATION.

for a period of 3.6 seconds followed by 3 nodal beats in the next 3 seconds (Fig. 1). He became momentarily unresponsive and later felt faint and dizzy. Left carotid sinus stimulation slowed the heart rate from 110 to 82 beats per minute. A double Master's exercise test failed to develop any electrocardiographic changes of coronary insufficiency.

Treatment with tincture of belladonna was begun and thus far he has remained free of all symptoms related to the "attacks." Carotid sinus pressure has been applied on two occasions since the institution of treatment and it did not slow the cardiac rate significantly.

Case 4. W. C. H., a 42 year old school superintendent, was examined March 23, 1945. For 17 years he had indigestion characterized by epigastric discomfort and gaseous eructations. Sometimes he had experienced vomiting and dizziness, and had actually fainted during periods of abdominal distress. In 1943, X-ray studies revealed a duodenal ulcer.

He was rejected from military service in 1942 because of the presence of a heart murmur which developed after an attack of rheumatic fever in 1938.

He was a tall, sthenic man. Except for a grade II systolic mitral murmur, the physical examination was not remarkable. The blood pressure was 102/60.

During the period when he was under close observation, there were two episodes of fainting. One occurred two hours after the administration of castor oil. The second syncopal attack followed a "snack" consisting mainly of cold potato salad. In each instance, after the brief lapse of consciousness, he vomited copiously.

Cholecystogram showed a functioning gall bladder without stones. The upper gastrointestinal tract was normal on X-ray examination. The electrocardiogram was normal.

Right carotid sinus pressure produced syncope in association with cardiac asystole which lasted 3.6 seconds, followed by several nodal beats. Left carotid sinus stimulation did not alter the cardiac rate.

Therapy, including tincture of belladonna and Gelusil, controlled most of the digestive complaints. There have been no further syncopal episodes.

Discussion

Etiology. The cause of carotid sinus hypersensitivity is not known. However, contributory factors are recognized. More than 85 per cent of the reported cases occurred in males, the majority of whom were between 50 and 70 years of age. The following drugs are said to increase carotid sinus sensitivity: digitalis, morphine, nitrites, caffeine, calcium and nicotinic acid. Among the trigger mechanisms initiating attacks are sudden movements of the head, coughing, shaving, tight collars, or anything that causes pressure on the carotid sinus. Stooping and straining at stool also have been related to the initiation of attacks.

Mechanisms. Weiss described three mechanisms by which stimulation of a hypersensitive carotid sinus may bring about cerebral ischemia and syncope: (1) by in-

ducing a precipitous fall in blood pressure with little or no bradycardia; (2) by causing bradycardia and cardiac standstill; and (3) by inducing reflex cerebral ischemia which often causes not only syncope but also convulsions and focal neurologic signs. Of these, the second, cardiac inhibition, is most frequently encountered and most often recognized.

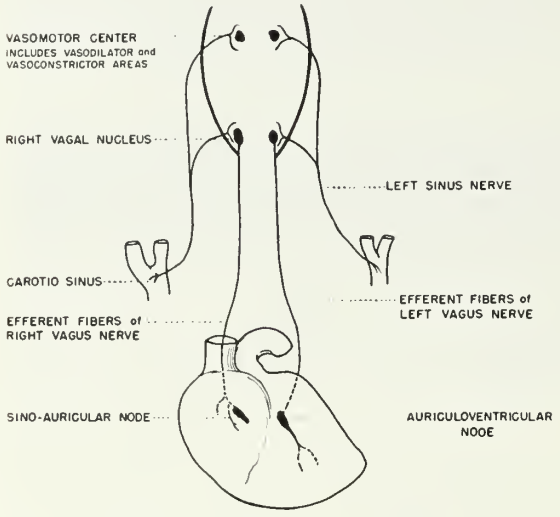


Figure II - CAROTID SINUS REFLEX ARC (SIMPLIFIED)

The pathways and centers involved in the carotid sinus syndrome are illustrated diagramatically in figure 2. Stimulation of the carotid sinus results in afferent impulses which pass via the sinus nerve, a branch of the glossopharyngeal, to the vagus nucleus and also to the vasomotor centers in the medulla. From the right vagus nucleus efferent impulses pass via the right vagus nerve to the sino-auricular node and from the left vagus nucleus through the left vagus nerve to the auriculoventricular node. Thus, stimulation of the right carotid sinus usually is an effective means of inducing cardiac slowing or arrest since inhibitory impulses thus created are transmitted via the right vagus nerve to the sinus node, the usual site of impulse formation. Stimulation of the left carotid sinus resulting in efferent impulse transmission over the left vagus nerve to the auriculoventricular node may result in heart block of varying degrees, or in slowing of the heart rate, but it rarely causes cardiac standstill. In addition to these effects upon the heart resulting from vagal inhibitory action, carotid sinus stimulation may also exert a depressor action upon the vasomotor center in the medulla with resulting hypotension and syncope.

Supplementary Factors Resulting in Carotid Sinus Hyperactivity. Excessive stimulation of the carotid sinus reflex in biliary and digestive tract disease is suggested as a possibility in Cases 3 and 4. Osler, in 1893, described the occurrence of syncope, giddiness, collapse and even convulsions during biliary colic. He later observed cardiac standstill during an attack of biliary colic and suggested that it resulted from the very intense pain. In 23 patients with symptoms due to biliary tract disease, Engel[2] found asystole of 3 seconds or longer after carotid sinus massage in 18 instances. He considered this manifestation of sinus hyperactivity to be due to a summation of afferent impulses, a considerable portion of which arise from end organs in the biliary and gastrointestinal tracts. When additional stimulation is provided by massage of the carotid sinus the threshold of reaction of the vagal centers in the medulla is reached and cardiac inhibition or standstill results. Thus, it would appear that hyperactivity of the reflex may result from excessive stimulation of a carotid sinus which is not overly sensitive, and that this excessive stimulation may arise from anywhere along the carotid sinus reflex arc or from connecting pathways. The possibility exists, especially in elderly persons, that cardiac arrest induced by excessive stimulation may occur, causing sudden and otherwise unexplained death.

Diagnosis. The diagnosis of carotid sinus syncope is dependent upon the history and the reproduction of an identical attack by pressure on one of the carotid sinuses. The production of cardiac standstill by carotid sinus massage is not in itself sufficient to establish the diagnosis. The actual production of faintness or a syncopal episode is necessary. Asymptomatic cardiac slowing and even arrest may be elicited in normal subjects.

Whenever syncope constitutes a diagnostic problem an examination of carotid sinus activity should be made. It has been our

practice to have the patient recumbent during carotid sinus massage and to obtain a simultaneous electrocardiogram. Lead II is preferred for the tracing. The location of the carotid sinus is usually identified by the bulge or prominence at the bifurcation of the artery near the angle of the jaw. First light, then firm pressure is applied for 3 seconds or less to the right carotid sinus. If cardiac slowing and syncope result the test is positive. Then, after an interval of several minutes, the left carotid sinus may be tested. It should be emphasized that it is hazardous to continue carotid sinus pressure for longer than three seconds. Prolonged massage has resulted in paralysis and death. As a precautionary measure during the test a hypodermic syringe containing atropine sulfate (0.0006 Gm.) is kept at hand, ready for emergency use.

Impaired Cerebral Circulation. Of special interest and importance are patients with syncope who have an internal carotid artery partially occluded near the point of bifurcation. These individuals may develop syncope on digital compression of the opposite carotid bifurcation not because of carotid sinus hypersensitiveness but as a result of the manually induced diminution in blood flow in the cerebral circulation already impaired. Webster, Gurdjian, and Martin[3] reported such instances of partial occlusion of the carotid artery resulting from cerebral atherosclerosis, and called attention to the similarity of the response of this group, when the contralateral carotid sinus is massaged, to the so-called reflex cerebral ischemic reaction of the hypersensitive carotid sinus. In these patients carotid sinus pressure is dangerous. This fact lends additional strength to the recommendation that care should be exercised whenever a test for carotid sinus hypersensitiveness is employed.

Summary

(1) Four cases of syncope resulting from hyperactive carotid sinus cardioinhibitory reflexes are reported.

(2) The etiology, mechanisms, and diagnosis of carotid sinus hyperactivity are discussed. The association of carotid sinus syncope with digestive symptoms is noted.

(3) Attention is directed to the hazards of carotid sinus stimulation.

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Vertebral-Body Biopsy. Craig, Frederick S., Bone and Joint Surg., 38-A:93, 1956.

A set of instruments has been designed to facilitate vertebral body biopsy. This set of instruments consists of a cannula, two cutters, a trocar with a semi-blunt point which is used to push aside nerve trunks, vessels and other tissues between the surface and the centrum selected, and a blunt-pointed stylet which fits into the lumen of the cutter and can be used to palpate tissues ahead of this cutter. An important adjunct to this biopsy set is a sharp-toothed worm which insures that the cut section is removed as the cutter is withdrawn. The technic of the biopsy is described and accurate radiographic control is used throughout. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

An understanding of what is known of the etiology and pathogenesis of hypertension is basic in the application of the ever-increasing number of hypotensive drugs available to the physician.

THE MEDICAL MANAGEMENT OF HYPERTENSION*

WILLIAM G. FUQUA, M.D., Columbia, Tenn.

The hypotensive drugs, though not ideal, are a "major break through" in the treatment of primary hypertension. Prior to a few years ago all we had to offer the hypertensive patient was support, sedation, weight reduction, occasionally sympathectomy, and a diligent search for unilateral kidney disease, pheochromocytoma, coarctation, brain tumor, and endocrine disorders.

Results of Use of Hypertensive Drugs

Our prime aims in medicine are to prolong life and to make it more enjoyable. There is unequivocal evidence that both are accomplished by the use of the hypotensive drugs in many patients who are in the accelerated or malignant phase. Figure 1,

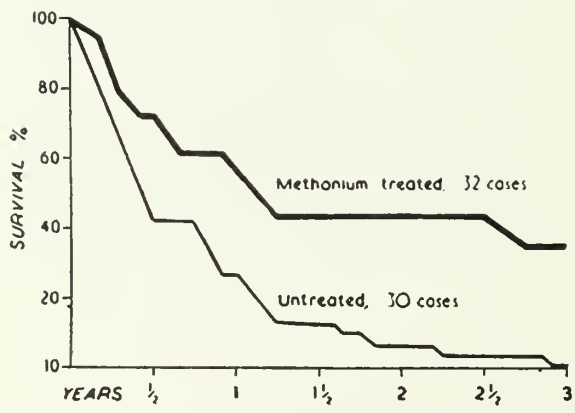


FIG. 1.

(Courtesy of McMichael and Murphy and J. Chronic Diseases.[1])

from McMichael and Murphy,[1] shows survival rates of 32 cases treated with hexamethonium as compared to 30 untreated patients, all with malignant hypertension without gross uremia initially, and followed for three years. The rapid reversal of symptoms and often marked lessening of eye-ground changes, decrease in heart size, disappearance of EKG strain pattern, and rarely a drop in blood urea, can be attested to by practically all of us. The efficacy of these agents in the uncomplicated asymptomatic phase of hypertension is not, and will not be known for at least 15 more years as the duration of life at the onset of hypertension averages 20 years. The knowledge of the natural history of hypertension[2] and the ability to fit the individual patient into this pattern are most essential in successful treatment. The uncomplicated phase, sometimes free of symptoms, but more frequently accompanied by intermittent complaints of tiredness, nervousness, dizziness, headache, and palpitation, usually has a 15 year duration. Following this there is an average 5 year period of complications terminating in death as result of combinations of cardiac hypertrophy, arterio, and arteriolosclerosis. Approximately 2 to 5 percent of the patients at any time will enter the accelerated or, if you prefer, the malignant phase with death in one to two years.

Study of the Patient

In our eagerness to begin treatment we are occasionally guilty of an incomplete work-up. Evaluation of a patient with hypertension should include: becoming a friend to the patient; obtaining a detailed history and physical examination to recognize the phase of the patient's illness and complications; laboratory tests addressed to the cardiovascular system, blood counts, EKG, seven foot heart X-ray, cardiac fluroscopy, and if available orthodiagraphy; and those tests which focus on the kidneys, urinalysis, Fishberg concentration test, NPN, PSP excretion, intravenous pyelography, and occasionally retrograde pyelograms and urea clearance tests. I know of no way to diagnose pheochromocytomas without doing Regitine or benzodioxaine tests in the hypertensive levels, or the histamine test in normotensive levels since in some the symptoms will not be suggestive

*Read before the One Hundred and Twenty-second Semi-annual Meeting of the Middle Tennessee Medical Association, November 17, 1955, Fayetteville, Tenn.

and the hypertension will be fixed. We must be alert to coarctation, hyperthyroidism, acromegaly, myxedema, and Cushings disease. Cold pressor and Sodium Amytal tests are being used less, but may be of some value. The physician must have adequate base-line blood pressures preferably in sitting, lying. and standing positions.

Effect of Hypotensive Drugs

The occasional case in which the elevation of blood pressure is reduced to normotensive levels, yet the other manifestations of the disease continue their relentless progression, make one face the question: Is the elevation of pressure merely one of the hallmarks of hypertension rather than their underlying predecessor?

In any event, until the etiology or, probably etiologies of primary hypertension be established, the one common denominator, arteriolar spasm, will continue to be the focal point of action of the hypotensive drugs. The neurogenic component of vasomotor tone, varying from 15 to 85 percent of total vasoconstriction, may be reduced by decreasing central vasoconstrictor activity either at cortical or subcortical levels, by blocking the transmission of impulses across the sympathetic ganglion, or by increasing parasympathetic vasodilator activity. The biochemical actions of these drugs have not been clarified, though we know the approximate sites where most act. The central blockers are hexamethonium, pentapyrroldenium, better known as Ansolysen, and dibenzyline all probably having as their mode of action competitive inhibition with acetylcholine or analogous substances. Veratrum and its alkaloids apparently stimulate the afferent vagal receptors on the anterior surface of the heart and in the lungs, the so-called Von Bezold reflex. Humoral substances—renin, seratonin, VDM, and the like are apparently partially blocked by Apresoline. Freis[3] had recently shown that in the dog to which seratonin had been given the response to the ganglionic blocking agents was much less, a point that had been surmised, but heretofore unproven. Accordingly, it is surprising that the blood pressure can be lowered in almost all patients with renal failure by the use of drugs which decrease the neurogenic component. Salt reduction has been thought to be effective only if the daily intake were brought to 500 mg. or less, which is accomplished only by the Kempner rice diet or another radical low salt diet plus a cation resin. Gorb[4] and Smirk,[5] however, feel that the effect of the ganglionic blockers is enhanced with a salt intake of one to two grams a day.

Numerous side effects indicate that these drugs are not ideal. With reserpine there is in order of frequency: bradycardia, mild sedation, nasal congestion, epistaxis, nausea, vomiting, diarrhea, nightmares, drowsiness, decreased libido, and postural hypotension. Very rarely salt retention with the precipitation of congestive failure may appear. Not infrequently increased appetite and gain in weight occur. Many of these symptoms are transient or can be relieved by antihistaminics.

Hydralazine may cause headache, neck, arm and shoulder pain, malaise, rhinitis, conjunctivitis, lacrimation, photophobia, peri-orbital edema, hiccough; giddiness, substernal pain, and possibly myocardial infarction secondary to drop in blood pressure, any combination of which causes about 30 percent of patients to discontinue the drug. Rheumatoid or lupus-like syndromes are seen in about 10 percent, increasing markedly with doses of 400 mg. or over a day, and are reversable with omission of the drug.

Veratrum alkaloids produce prohibitive nausea and vomiting in about 50 to 70 percent of patients. It is doubtful that combining these with reserpine decreases the veratrum dosage, thereby increasing its therapeutic index.

Hexamethonium and Ansolysen may result in severe and/or prolonged hypotension which can be reversed with norepinephrine, visual blurring and constipation in most, the former controlled with pilocarpine, the latter with oral Prostigmin, 15 to 30 mg., or an irritative cathartic, increased or decreased heat in the extremities, gastric dilatation, nausea and vomiting, urinary hesitance, and rarely obstipation, the last being quite dangerous as increased absorption of the drug results. Fatal pulmonary fibrosis has

been reported in individuals on hexamethonium.[6]

We would all be far more successful in our management of these cases if we viewed each as an individual problem of bio-assay of whichever drug we chose. Though combinations of the drugs occasionally seem to enhance the action of each, the use of several different ones combined in one tablet is usually inadvisable due to their inflexibility.

For the patient in the uncomplicated phase who is asymptomatic, and who has only labile hypertension, the grounds for the use of the hypotensive drugs have not been established. Whether or not their actions can actually prevent the onset of symptoms and complications is a moot aspect. I feel that weight reduction, sedation, reserpine, and possibly Apresoline, the latter in a few, should be tried in this first phase. The indication for their use is much clearer in the symptomatic uncomplicated phase as symptomatic relief is so welcome, this occurs in about 80 percent by the use of reserpine, Rauwolfia, Apresoline, or rarely a veratrum alkaloid.

In the complicated phase, reserpine alone is satisfactory in about one-half of patients. There is no possible way, short of therapeutic trial, to predict those who will respond favorably regardless of the age, the blood pressure level, or results of pressor release tests. In the majority, however, a ganglionic blocker and/or Apresoline must be employed. Cerebrovascular accidents and myocardial infarctions within the previous six months are almost absolute contraindications to the use of these drugs. Renal insufficiency is not, but the blood pressure must be decreased very gradually with frequent urea of NPN determinations.

With recognition of the onset of the accelerated phase, the treatment of choice is probably sympathectomy. This was one of Dr. George Perera's points as he concluded the Conner Memorial Lecture this year at the American Heart meeting. The drugs should be given a trial in the accelerated phase only if the patient is most cooperative, intelligent, and financially able to afford from fifty cents to a dollar a day indefinitely.

Hypertensive encephalopathy and acute pulmonary edema on the basis of hypertension are dramatically relieved by intravenous hexamethonium, Apresoline, or a veratrum alkaloid. Ansolysen should not be given intravenously in such incidences and probably under no circumstances, as there is such a lag period between the administration and its effect that calculation of dose is impossible (action times in figure 2).

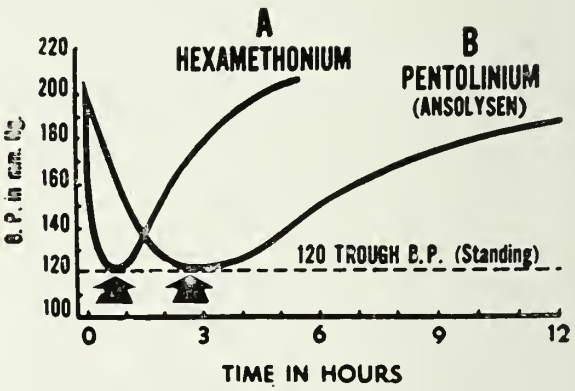


FIG. 2.
(Courtesy of Smirk and McQueen and J. Chron. Diseases.[5])

Improvement if any in patients with uremia is transient, as the renal blood flow and glomerular filtration usually decrease in greater proportion than does the renal vascular resistence, resulting in decreased filtration fraction. Shroeder[6] reported ten deaths in such patients while they were still in the hospital.

Several other points should be made in the management of the individual patient: to engender cooperation the patient must understand as much as possible about his disease; the ganglionic blockers should be started in the hospital; the head of the bed should be elevated to gain the orthostatic hypotensive advantage; partial tolerance is frequent, but can usually be overcome; dose requirement usually decreases with hot weather, diarrhea, or intake of alcohol; partial refractiveness ensues as a ganglionic blocker is omitted over a day; and finally the majority of patients, even in the complicated phase, in three to six months may be brought down the therapeutic steps,[7] but usually have to remain on reserpine or Rauwolfia indefinitely (see Figure 3).

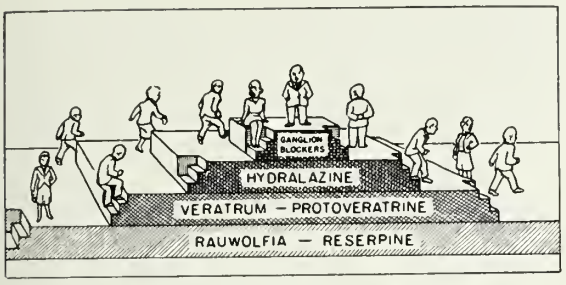


Fig. 1 - The steps in the drug treatment of essential hypertension

FIG. 3.
(Courtesy of Wilkins and J. Chronic Diseases.[7])

Table 1 gives the results in a few of my patients, all of whom were in the phase of complications without urea retention.

Table 1

TREATMENT RESULTS IN COMPLICATED PHASE

Drug	*Number of Patients*	*Treatment in Months*	*Number of Failures*	*Average Lowering of Blood Pressure (systolic/diastolic)*
Reserpine	8	11	2	28/15
Apresoline	2	23	0	36/12
Hexamethonium	6	21	0	34/15

Summary

The management of hypertension, though now much more successful, is also much more complex, taxing both the art and science of medicine. Success of treatment does not depend so much on the choice of drug as it does on the physician's skill in winning the patient's cooperation, and in his ability to place the patient into the natural history of his disease.

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Brucellar Spondylitis. Mantle, J. A., Bone and Joint Surg. 37-B:456, 1955.

The symptoms of brucellar spondylitis in man includes pain which is often severe, fever, rigidity of the spine and, rarely, deformity and abcess. The clinical course is more rapid than tuberculosis but the disease must always be differentiated from tuberculosis. Diagnosis is confirmed by agglutination in a dilution of one in a hundred or more and sometimes by positive blood culture. Five cases of brucellar spondylitis are reported.

Radiograms of the first case reveal a lesion involving the fifth, sixth and seventh cervical vertebrae and the brucella abortus agglutinated at a dilution of 1 in 320. Aureomycin, combined with streptomycin were the antibiotics used and radiograms, seven months later, showed no evidence of activity of the disease.

The second case was a 32 year old male whose first radiograms were normal but later showed narrowing of the disc space between the eleventh and twelfth dorsal vertebrae. His agglutination of brucella abortus was positive at 1 in 1,250 dilution. Spinal fusion operation was performed between the eleventh and twelfth dorsal vertebrae and he was given Aureomycin postoperatively and the patient had no symptoms fourteen months after his operation.

The third case exhibited radiographic involvement of the second and third lumbar vertebrae which, five years later, showed bony fusion.

The fourth case suffered from severe headaches and girdle pain in the tenth thoracic segment and subsequently had an agglutination of brucella abortus in a dilution of 1 in 160. He showed no improvement with sulfamezathine but his fever promptly disappeared on Chloromycetin. Radiograms, four months later, reveal a lower thoracic kyphosis and a fusion between the ninth and tenth thoracic vertebrae.

The fifth case was a 61 year old mariner with headache, backache and fever and whose brucella abortus agglutinated at 1 in 500. His fever promptly subsided with Aureomycin but he continued to have backache and four months later streptomycin with Aureomycin was given. Six months later, radiograms revealed destruction between the eleventh and twelfth thoracic vertebrae and this time he was treated with streptomycin, sulfadiazine and later streptomycin and Terramycin. He has since progressed satisfactorily. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

CASE REPORT

Calculus Overshadowing Benign Tumor of Ureter*

Chester D. Allen, M.D., Samuel B. Nuzie, M.D., Miguel A. Llanos, M.D., and Joseph M. Escarpenter, M.D., Memphis, Tenn.

Roentgenographic studies in the following case report failed to prepare the surgeon for more than an anticipated ureterolithotomy. The operation revealed the major indication for surgery to be a benign tumor of the ureter.

Although primary ureteral tumors are relatively rare, the majority of these are malignant.[1-6] Primary benign tumors of the ureter are quite uncommon and the case reported below involves duplication of renal pelves with bilateral incomplete duplication of the ureters. As far as can be determined in a survey of the literature, a primary tumor most nearly like this one in location was a primary papillary transitional cell carcinoma in the lower right ureter of a bifid renal pelvis described by Senger, Fendor and Furly.[7]

Case Report

A 43 year old mother of 12 healthy children was well until one year before consulting us for repeated attacks of colicky pain in the left lumbar region. This pain radiated down toward her urinary bladder causing a strong desire to urinate. These attacks were associated with chills and fever, lasting from 4 to 24 hours. One month before her appearance at our clinic, these attacks came on more often, lasting up to two days, and she began to lose weight progressively.

The patient was a thin woman who did not appear acutely ill at the time of the first examination, October 8, 1954. A tender mass was felt in the left lumbar region which did not move on respiration.

Urinalysis showed the presence of 50 red blood cells and 100 white blood cells. The blood picture consisted of 5 million erythrocytes and 14.8 thousand leukocytes of which 88% were neutrophils, 8% lymphocytes and 4% monocytes.

Intravenous pyelography showed equal and good concentration of dye in both kidneys with normal calices and pelvis of the right kidney. The left kidney showed dilatation of the upper and lower pelves. There was a large ovoid density on the left side of the spine between L-3 and the ureter, which had the appearance of a laminated calculus. The fact that this density lay along the course of one of two parallel shadows on both sides of the spinal column suggested a double ureter.

The retrograde pyelography clearly revealed bilateral double pelves with bilateral duplication of the ureters. The ureters appeared to join 10 cm. above the ureterovesical junction. The pelves were placed one above the other with the upper one smaller than the lower. On the left side there were blunting of the calices and some dilatation of the pelves. A laminated calculus, 2 cm. by 1 cm. by 1 cm. was found in the left medial ureter just above a point where both ureters joined to form a common ureter. The ureter containing the calculus was dilated above it.

Presacral perirenal insufflation demonstrated the right kidney to be well outlined, but the left could not be outlined at any time, suggesting perinephritic disease. The percutaneous femoral aortogram showed the presence of several small renal blood vessels in the renal pedicle on both sides with the blood vessels apparently entering the upper half of each kidney.

Thus a diagnosis was made of acute pyelonephritis due to obstruction of the ureter by a calculus in one of the ureters on the left side; it was decided to perform a ureterolithotomy. At operation, however, the presence of a ureteral tumor was discovered and so a left ureteronephrectomy was performed.

The specimen consisted of a double kidney weighing 235 Gm., 18 cm. long, 8 cm. wide, 4 cm. thick. The kidney appeared to be divided almost into two parts and the septum between the two parts was about 3 to 4 cm. wide. This septum contained renal cortex as well as pyramids. The capsule of the kidney stripped with difficulty, leaving a cortex which had a few small yellow areas thought to be abscesses. The renal cortex and pyramids were hemorrhagic and apparently were involved by a suppurative process in the area which separated the two major pelves. A stone was present, ovoid in shape and about 2 cm. long and 0.75 cm. in diameter. It was brown in color and firm in consistency. Each ureter was about 6 cm. in length, draining the respective pelvis. A tumor of the common ureter found just below the junction of the divided ureters weighed about 5 Gm. and measured about 2 cm. long and 0.5 cm. in diameter. It was soft, pink, and almost occluded the lumen of the ureter.

Microscopic Examination. The kidney revealed many abscesses in the cortex and in the pyramids. The ureteral tumor mass showed a small area which might have represented a grade I papillary carcinoma of the ureter, but it was probably the way the ureter was cut. There was considerable hyperplasia of the transitional epithelium in the section. The basement membrane was intact and no invasion was demonstrated.

Comments. Microscopically, the tumor seemed to bear out the conclusion stated by Braasch, that, "stroma covered by layers of

*From the Urological Service, St. Joseph Hospital, Memphis, Tenn.

transitional epithelium" makes up the mass. McCrea's thought, "that time is the only element necessary to effect the change from benign to malignant" makes one consider radical treatment at once.

Summary

A primary benign tumor of the common ureter is reported in a patient having bilateral duplication of the renal pelvis with bilateral incomplete duplication of the ureter with a calculus in one of the ureters. The ureteral tumor failed to manifest itself on X-ray, probably overshadowed by the presence of an opaque calculus just above it.

Addendum: On March 2, 1956, the patient was found to show no evidence of urinary tract disease.

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FIGURE 1.
Tumor of ureter showing hyperplasia of transitional epithelium and intact basement membrane.

CLINICOPATHOLOGIC CONFERENCE

Kennedy Veterans Administration Hospital

Aneurysm, Pancreatico-Duodenal Artery, with Perforation into the Pancreatic Duct

Charles A. Rosenberg, M.D., and J. M. Young, M.D.*

Case Presentation: This 59 year old white male had been admitted into three different VA hospitals during the five year period prior to his transfer here. He was first seen with aching and cramping in the calf muscles. There was absence of the dorsalis pedis, posterior tibial and popliteal pulsations. During his hospitalization bilateral lumbar sympathectomies were performed with good results. While hospitalized he developed a left hemiplegia which cleared almost completely, but a minimal weakness of the left arm and leg continued. Laboratory studies during this admission were not remarkable.

About six months later he developed cramping epigastric pain in association with fullness and eructation. The attacks came soon after a heavy meal and he had an intolerance to hog fat. B. P. was 170/100. Physical examination revealed residual evidence of the old left hemiplegia. The laboratory results were normal except for RBC of 4.2 million. Liver function tests including cephalin flocculation, thymol turbidity, total protein, and bilirubin determinations were normal. A gall bladder series, gastrointestinal series, and barium enema negative. His symptoms responded to an ulcer diet.

At the time of the next admission 2 years later he had noted a generalized pronounced weakness and the examination showed marked pallor, a pulse 72, and B. P. 140/70. There was a generalized pronounced wasting of the muscles, which was more marked on the left. His skin and conjunctivae were very pale.

Laboratory: RBC 1.47 million, Hgb. 4.7 Gm. per cent, sed. rate 36 mm/hr. (corr.), serological test for syphilis were negative. WBC was 5300 with a normal differential. Reticulocyte count varied from 12 to 18 per cent; platelets 290,000. Total protein 6.7 Gm. per cent with albumin 4.3 Gm. per cent. Gastric analysis revealed free HCl. Barium enema and gastrointestinal series again were negative but one observer noted the presence of "multiple calcified lymph glands" in the films (Fig. 1). Bone marrow study revealed only erythroid hyperplasia. Several stools were positive for occult blood. Proctoscope examination was negative; the electrocardiogram was normal. He was given three transfusions.

Several months later he was admitted into another VA hospital for similar complaints. He was very pale. B.P. was 80/65, pulse 94. He was not jaundiced. The examination of the heart, lungs, abdomen, and rectum were negative. RBC was 1.18 million, Hgb. 3.5 Gm. per cent; serum amylase 57 units; NPN 31 mg. per cent, reticulocytes 6.2 per cent. Coombs test was negative. There was no abnormal hemolysis. The bleeding and clotting times were normal. The stools were repeatedly positive for occult blood. Gastrointestinal series again was negative; calcifications were again noted. With blood transfusions and iron therapy the RBC came up to 4.0 million. Serum bilirubin was always normal.

At about this point sugar was found in the patient's urine and blood sugars were elevated to levels of 320 mg. per cent (fasting). Glucose tolerance curve was diabetic in type. He was placed on 45 units NPH insulin and a diabetic diet and was controlled, but poorly, since blood sugars continued to be 250 to 320 mg. per cent.

The patient was transferred to this hospital where repetition of the above tests gave similar results. The spleen was noted to be enlarged. After 21 transfusions to correct his anemia an exploratory laparotomy was performed.

Discussion

DR. CHARLES A. ROSENBERG: This 59 year old white male was known to have hypertension and generalized arteriosclerosis with obliterative vascular disease. Bilateral lumbar sympathectomies had been performed with good results. He had a left hemiplegia which had cleared almost completely, probably also on the basis of his arteriosclerotic vascular changes. About six months after his sympathectomy he developed cramping epigastric pain associated with fullness and eructation, and a marked intolerance to fat. The more common causes for these complaints, such as peptic ulcer or gall bladder disease, were investigated, with negative findings. There was no mention of pancreatic function tests at this time.

When he was next admitted to the hospital two years later he had evidence of a marked anemia and muscular wasting and was normotensive. A reticulocytosis was noted. Gastric analysis revealed free hydrochloric acide and gastrointestinal X-ray examinations were reported as negative. Stools were positive for occult blood and the patient was given transfusions. There was obvious evidence of gastrointestinal bleeding, but the source was not identified.

*From the Medical and Laboratory Services of the Veterans Administration Medical Teaching Group Hospital (Kennedy), Memphis, Tennessee.

One important observation was made, however, on that admission. Multiple calcified "lymph glands" were noted on the abdominal X-ray film.

Several months later there was an admission to another hospital for similar complaints. Marked anemia and muscular wasting were again noted and the blood pressure now was at hypotensive levels. Various tests were run to determine the presence of an hemolytic state, but these were all negative. Again, stools were repeatedly positive for occult blood, but the gastrointestinal series was negative. Calcifications were again noted on the abdominal X-ray examinations. Blood transfusions and iron therapy helped to restore the red blood count to almost normal levels. It was at this time that the patient was noted to have glycosuria and hyperglycemia, and diabetes mellitus was diagnosed. Although he was placed on a diabetic diet and insulin, he was only poorly controlled, and hyperglycemia persisted. The patient was then transferred to this hospital, where repeat laboratory and X-ray examinations gave similar results. Splenomegaly was then noted for the first time. After proper preparation with transfusions an exploratory laparotomy was performed. There is no comment as to how massive the gastrointestinal bleeding was, or as to how many transfusions were necessary to maintain this patient near a normal level.

In summary, then, this 59 year old white male adult had evidence of generalized arteriosclerosis with obliterative vascular disease, which necessitated a sympathectomy. A cerebral vascular accident had occurred, but he was left with only minor residuals of this condition. Subsequently, gastrointestinal bleeding with profound anemia developed. Calcifications within the abdomen were noted on X-ray examinations, and diabetes and splenomegaly were also noted.

In attempting to arrive at an etiologic basis for this patient's various clinical manifestations, let us first discuss the differential diagnosis of calcification or other increased densities which may be encountered on abdominal X-ray films. First, on looking at this patient's abdominal X-rays (Fig. 1), I note



Fig. 1.

that he had diffuse flecks resembling calcification, of varying sizes, which extend across the midline at the level of L-2 to L-3, progressing from the right lower to the left upper quadrant. These findings are rather typical of pancreatic calcification, and I see no evidence of abdominal lymph gland calcification.

The biliary tract may be the site of calcification. When the liver is involved one must think of intrahepatic gallstones, calcified liver abscess, tubercles, and primary carcinoma with necrosis and calcification. Also, hepatic cyst formations may be present in which irregular streaks or flecks in the walls of the cysts may cause changes in the X-ray picture. The gall bladder may contain opacities, and occasionally calcification of its wall occurs. Calcification of the spleen may occur. It is suspected by the presence of multiple round opaque shadows within the substance of the spleen. Tubercles, infarcts, abscesses, and certain parasitic infestations may also give rise to shadows of increased density within the spleen. Pancreatic calculi may be present in a typical location, as noted above. These calcifications consist of calcium carbonate and calcium phosphate and appear as little specks of varying size along the course of the pancreas in the region of L-2 and L-3 on both sides of the midline. Calcification in areas of fat necrosis may occur and calcification of echinococcus cyst formation in the

pancreas may also occur, although this is much more rare.

One must also consider the genitourinary tract, in which calcification may occur in either the kidneys, ureters, or bladder. Shadows within the kidney may represent calculi, tuberculosis, malignancy, solitary cysts, or parenchymal calcification such as that which occurs in hyperparathyroidism, either primary or secondary. Perirenal abscess formation may also lead to calcification. Ureteral stones are not uncommon. Within the urinary bladder calculi may be present, either free or in diverticula. Opaque or calcified foreign bodies may be present within the urinary bladder. Either benign or malignant neoplasm within the urinary bladder may go on to necrosis and calcification.

Calcification of abdominal lymph nodes may occur. The most common cause for calcification of these nodes is tuberculosis. However, typhoid fever, histoplasmosis and other infections must be considered.

Calcification may also occur in blood vessels within the abdominal cavity, such as the aorta, or in an arteriosclerotic aneurysm. The common iliac, external or internal iliac vessels may be involved. Calcification of the splenic artery occasionally occurs, and it is said that a characteristic crescent or ring-like shadow is present in this area when the condition is present. Calcification of the renal and hepatic arteries also occurs. Phlebolith formation in the various veins of the pelvis may give rise to shadows of increased density which may be confusing on X-ray examination.

Conditions which need not be considered in this case where shadows of increased density may occur include calcification in the uterus, adnexa, or in abdominal pregnancies.

Opaque foreign bodies or enteroliths may be present in the intestinal tract, or there may be opaque matter in the intestinal tract which can lead to confusion. The male genital tract may reveal evidence of prostatic or seminal vesicle calculi. Tuberculosis of the adrenal glands may present calcification of the region above the kidneys.

One must also think of extravisceral shadows within the abdomen such as calcified parasites, paraspinal abscesses, the presence of drugs containing heavy metals which were injected intra-gluteally, and elevation of the skin next to the X-ray film, such as occurs occasionally with moles and warts.

This patient's X-rays resemble the classical findings that are seen with pancreatic calcification. He also manifested abdominal symptoms, marked fat intolerance, extreme muscular wasting and later on, a diabetic state, all of which could be attributed to the presence of a chronic pancreatitis. Chronic pancreatitis may be primary in origin, or may be secondary to a number of other causes. There seems to be a definite correlation between cholelithiasis and pancreatitis. Penetrating duodenal ulcer may give rise to a pancreatitis. Chronic alcoholism with cirrhosis is not infrequently complicated by fibrotic changes in the pancreas. Obstruction of the main pancreatic duct by calculi or tumor may result in pancreatitis. Occasionally, pancreatitis may follow an acute infection such as mumps, but this is by no means as common as other causes. In patients without jaundice, one must suspect gall bladder disease, alcoholism with cirrhosis, or penetrating duodenal ulcer. In patients with jaundice, one's suspicion must be directed primarily to carcinoma of the pancreas. Tuberculosis and syphilis of the pancreas both occur, but are both very rare.

From the clinical standpoint, chronic pancreatitis is three times as common in males as in females and is frequently asymptomatic until its late stages. Pain and fat intolerance are characteristic. Diabetes mellitus occurs in approximately one-third of the patients and steatorrhea in approximately one-half of the patients. Progressive weight loss, steatorrhea, and creatorrhea are not uncommon. Elevation of serum amylase is much more helpful in an acute attack than in the chronic state. The presence of tumors and cysts of the pancreas must be ruled out in the etiology of chronic pancreatitis with calcification.

Let us turn to the question of the patient's gastrointestinal bleeding. In any consideration of gastrointestinal bleeding one must remember than 85 per cent of the causes

are due to either bleeding peptic ulcer or esophageal varices. It is helpful to think of gastrointestinal bleeding in association with intragastric or extragastric causes, from an etiologic standpoint. The former include peptic ulcer, gastritis, gastric malignancy, lues or tuberculosis of the stomach, benign tumor of the stomach or the duodenum, postoperative hemorrhage, rupture of a sclerotic blood vessel, gastric crises of tabes, hiatus hernia, or trauma. This papatient's complaints may have been related to a peptic ulcer or gastritis. Because he manifested generalized arteriosclerosis, one must think of the possibility of a ruptured sclerotic blood vessel in the stomach as a cause for his bleeding.

Extragastric causes are too numerous to mention here. However, there are certain conditions which must be considered in the differential diagnosis. Cirrhosis of the liver with portal hypertension, and the development of esophageal varices must be kept in mind. In spite of the fact that the X-ray findings do not substantiate the presence of esophageal varices, they may be present and cirrhosis of the liver be found with minimal changes in the liver profile. Portal, mesenteric or splenic vein thrombosis may also lead to gastrointestinal bleeding. Primary splenic disease may be a factor. It should be noted that when the splenic vein is occluded, accessory venous channels form through the vasa brevia and veins in the fundus of the stomach, which may result in varices in that location. These varices may be present in the absence of esophageal varices, and bleeding may result.

The esophagus is the site of many lesions which eventually cause gastrointestinal bleeding. These include benign or malignant tumors, peptic ulcer, esophagitis with erosion, lues, tuberculosis, actinomycosis, diverticula or foreign bodies.

Various blood dyscrasias may also give rise to gastrointestinal bleeding, but there is no evidence that such a mechanism was present in this case. Disease of the gall bladder or pancreas must also be ruled out. Diverticula may be present at any point in the intestinal tract. A Meckel's diverticulum, particularly, may be the source of abdominal pain and intestinal bleeding. Some Meckel's diverticula contain ectopic gastric mucosa.

Rupture of an aneurysm or an abscess into the intestinal tract must be considered. Aneurysms of the splenic and hepatic arteries occur. Aneurysms of this type may also give rise to pressure on the pancreas and pancreatitis. If this patient had exhibited episodes of extensive hemorrhage, or if abdominal auscultation had revealed a bruit or murmur, an aneurysm of this type could be more seriously considered in this case. Lastly, one must also rule out swallowed blood from the lungs and upper respiratory tract as a cause of melena or hematemesis.

Now let us consider this patient's splenomegaly, and see if we can fit it into the clinical picture thus far developed. Enlargement of the spleen may occur as a result of changes in its vascular and supporting tissues secondary to congestive heart failure, splenic or portal vein thrombosis, pressure on the splenic or portal vein by lymph node or tumor, splenic infarct, hepatolienal fibrosis, or gastrointestinal bleeding. A multitude of infections may result in splenomegaly, and it would be pointless to enumerate them here. Certain blood dyscrasias may be manifested in part by splenomegaly, but again, this patient exhibited no evidence that such a disturbance was present. Some metabolic aberrations, absent from the clinical picture under discussion, may give rise to splenomegaly. Tumors of the spleen, primary or metastatic, benign or malignant, or splenic cysts may also cause enlargement of this organ. And, finally, there is a miscellaneous group of disorders in which splenomegaly is manifested, such as ptosis of the spleen, torsion of the splenic pedicle, active rickets or malnutrition, Brill-Symmers disease, porphyria, congenital hydrops of the spleen and Albers-Schonberg disease (marble bone).

I believe that the most likely cause for this patient's intra-abdominal calcification, his abdominal symptoms and his diabetes mellitus was chronic pancreatitis with calcification. I would like to be able to explain the splenomegaly and the gastrointestinal bleeding as manifestations of a common disorder. This might be accomplished by considering the possibility of splenic vein

thrombosis with secondary enlargement of the spleen and the development of an accessory venous collateral circulation as noted above, with the presence of the varices in the fundus of the stomach, but not in the esophagus. These varices could subsequently have ruptured, causing the gastrointestinal bleeding noted in this patient's clinical course.

Final Clinical Diagnoses

1. Chronic pancreatitis with calcification.
2. Thrombosis of the splenic vein with congestive splenomegaly.
3. Gastric fundal varices with erosion and bleeding.
4. Diabetes mellitus (secondary to pancreatitis).
5. Generalized arteriosclerosis with obliterative vascular disease of the lower extremities and residual hemiplegia following cerebrovascular accident.

Findings at Operation

DR. J. M. YOUNG: The exploratory laparotomy was performed by Dr. R. F. Bowers, Chief of the Surgical Service. The abdomen was opened through a high transverse incision. Inspection and palpation disclosed a hugely distended gall bladder but no gallstones. There was some calcification in the walls of the aorta and iliac arteries. The spleen was moderately enlarged. The pancreas was enlarged and firm, and beneath the head was a firm, calcified, pulsating mass. Dissection disclosed this to be an aneurysm, probably arising from the pancreaticoduodenal artery. This exerted pressure on the pancreas and had eroded into the main pancreatic duct which was the source of his gastrointestinal hemorrhage. This also compressed the portal vein and common duct. To remove this lesion necessitated a pancreatico-duodenectomy. Throughout the operation the oozing of blood was very marked.

This oozing continued. The patient received 16 transfusions while on the operating table and 44 more during his postoperative survival period; which lasted about forty-two hours. At autopsy no large bleeding vessels were found, but the oozing had produced extensive retroperitoneal and intraperitoneal hemorrhage.

The surgical specimen of the pancreaticoduodenectomy is shown in Fig. 2. The



FIG. 2.

aneurysm measured 4 cm. across and was partly filled with granular laminated blood clot. The walls were brittle and friable. The opening of the aneurysm into the pancreatic duct was clearly demonstrated. In the head and neck of the pancreas the ducts were dilated and contained small stones and gritty material. Microscopic sections disclosed extensive pancreatic fibrosis and chronic inflammation.

NOTE: This case then represents an elderly white male with generalized arteriosclerosis who developed a saccular aneurysm of the pancreaticoduodenal artery. This eroded into the pancreatic duct with subsequent repeated gastrointestinal hemorrhages and the development of pancreatitis and diabetes mellitus.

Final Anatomical Diagnoses

1. Aneurysm, arteriosclerotic type, pancreaticoduodenal artery.
2. Gastrointestinal hemorrhages, recurrent, massive, secondary to erosion of aneurysm into pancreatic duct.
3. Pancreatitis, pancreatic fibrosis and lithiasis, and diabetes mellitus.
4. Generalized arteriosclerosis.

The President's Page



Dr. Trabue

During the year I have tried very hard to make these letters as impersonal as possible and to deal with those matters which seemed to me of broad interest and importance to the membership of the Association. Perhaps the Editor will not mind granting me this last page as I leave office for some very personal remarks—a sort of last will and testament!

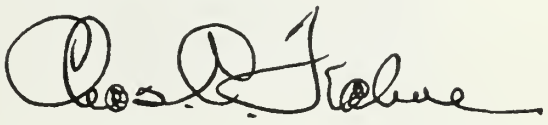
Your expression of confidence and friendship, manifested when you elected me as your President, will be, I am sure, the greatest honor to ever come my way. In accepting this honor I felt that I also assumed an obligation which could not be taken lightly. Therefore, I have tried to accept every invitation from County Societies, no matter how small the Society nor how far distant from Nashville. But I have found it impossible to accept all invitations, and I would like for the members of those Societies to know that I sincerely regret not being able to visit them on the dates that they had open, and I leave office keenly disappointed in not having had the opportunity to accept their invitations.

Visiting many of the Societies in various parts of the state has been a real pleasure and this is my opportunity to thank them again for their invitations and for their cordial hospitality. The fact that the House of Delegates has established a 'President's Expense Account' has lightened the financial burden of these trips and of several out-of-state trips on Association business.

There are many committees of this Association which have worked with exceptional diligence this year and all day meetings have not been unusual. It is the work of these committees all during the year which has made our Association rank high across the nation, not only in our scientific and educational affairs but also in many important fields of public service and public relations. May I on behalf of the membership thank each of these committeemen for the time that they have devoted to their tasks. I hope that their real reward will be in seeing that their efforts have been fruitful in accomplishing the aims of their committees.

My job this year has been made much more pleasant and much easier than it would have been otherwise because of the friendly and efficient help that I have had from every member of the headquarters office staff. I am sure that we, in Tennessee, get more work done with a smaller staff than does any other similar State with which I am familiar. Jesse Ford, although he has been with us for less than a year, is proving his capability by results already obtained in the field of Public Service. And I have saved for the last my thanks to Jack Ballentine because he has been my right-hand man. Although he has created many jobs for me because of his interest in the welfare of the Association, he has always been ready to help me in carrying out those jobs. We are fortunate to have an Executive Secretary with such a thorough understanding of the problems and philosophy of the profession and so much enthusiasm for the success of all of our undertakings.

I am sure that next year the Association is going to enjoy the leadership of Dr. Bob Wood, whose qualifications we all realize because of the fine work that he has already done in many capacities in different phases of organized medicine.



Our New President



R. B. Wood, M.D.
Knoxville

CAT.

Dr. Wood Follows Family Tradition...

His Father Became TSMA President Just Twenty-Four Years Ago

Robert Benton Wood followed in his father's footsteps when he devoted his life to the practice of medicine. As he assumes the office of President of the Tennessee State Medical Association this month, confreres and friends of the profession are reminded that his late father, Dr. W. P. Wood, received this same honor just twenty-four years ago.

Dr. Wood's accomplishments point to the high aims he has held for his profession, his community, and his country. He has manifested his willingness to assume responsibility and leadership not only in his practice, but in the affairs of organized medicine, public philanthropy, and civic endeavor as well.

A native Tennessean, Dr. Wood was born September 3, 1896, near Maynardville. He attended public schools in Union and Knox counties and received a Bachelor of Arts from the University of Tennessee in 1916. Following his graduation, he entered the Vanderbilt University School of Medicine and received his M.D. there in 1921. He interned at Vassar Brother's Hospital, New York, until January, 1923. He entered general practice in Knoxville and has limited his practice to Internal Medicine since 1928. In 1931 he was made a member of the American College of Physicians. In 1937 he was certified with the American Board of Internal Medicine.

A member of the Knox County Medical Society for thirty-three years, he was a delegate to the Tennessee State Medical Association many times. In addition, he was secretary of his county society for three years, became its president in 1944. He was a State delegate to the American Medical Association from 1947 to 1954.

Past memberships include the Board of Directors for the Red Cross, Y.M.C.A., and Chamber of Commerce. Dr. Wood was on the original Board of Directors for the City of Knoxville United Fund. He was instrumental in organizing the Tennessee Heart Association of which he is now president. He is on the Board of Directors of the Tennessee Blue Cross.

During World War II Dr. Wood served on the State Committee on Medical preparedness and on the Medical Advisory Committee to Selective Service which he continues to serve. Other activities include membership in the Tennessee Public Health Council since 1939, the Medical Advisory Board on Rehabilitation, and Chairman of the Medical Board of the T.V.A. Retirement System.

Dr. Wood has been Chief of Medicine for a number of years at Knoxville General Hospital and served three years as Chief of Staff at Fort Sanders Presbyterian Hospital. He is on the consultant staff of the University of Tennessee Student Hospital and the recently opened Scott County Hospital at Oneida. He served as Chairman of the Promotion Committee for the building of the University of Tennessee Research Memorial Hospital scheduled to open in June.

Mrs. Wood is the former Mary Elizabeth McCreary. The Woods live on Lakecrest Drive in Knoxville. Here too is Smokeywood Kennels devoted to the study of genetics, the line and inbreeding of show collies.

He is proud of three grandchildren. Two belong to a daughter, Mrs. Robbie Flowers of Somerville, Tennessee, and one belongs to another daughter, Mrs. Jerome Salomone of Silver Springs, Maryland. R. B. Wood, Jr., a son, is at the University of Tennessee in the Business Administration School.

Dr. Wood's father gave two sons to the medical profession, and three sons and two grandsons to the dental profession. Now Dr. Wood becomes the second member of that family to hold the highest office of the Tennessee State Medical Association.

J. H. Ford, Jr.

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APRIL, 1956

EDITORIAL

APPENDICITIS

A recent review[1] entitled, "Appendicitis 1930 to 1955," has attracted my attention. One of the authors has been writing repeatedly on this subject since 1927. His interests have been intense and his experience rather wide.

As a practitioner who does not do surgery, I have been interested in reviewing from my memory the teaching relative to the problem of appendicitis thirty years ago and that engaged in currently. The great battle twenty-five to thirty years ago was not so much relative to acute appendicitis, but rather an approach, which frowned on the then undue frequency of operation for chronic appendicitis. The opinion opposing this diagnosis gathered momentum and in the next ten years at least in this area, few surgeons would operate for chronic appendicitis. The idea that the appendix might be involved as a focus of infection and cause arthritis, iritis, general ill health and chronic fever, became dissipated as more and more patients fitted into this category were examined more carefully and accurate diagnoses made and confirmed, indicating that the appendix was playing no role whatsoever in the clinical picture. Finally, as time passed, chronic appendicitis became a clinical entity of greater rarity and of no respectability. There was no question that acute appendicitis could subside spontaneously and assume acuteness again, so that the syndrome of recurrent acute appendicitis was confirmed.

A review of this year's Cumulative Index points up the many and bizarre conditions with which acute appendicitis may be confused. To be mentioned are cholecystitis, hepatitis, duodenal ulcer, nephrolithiasis, acute infections in the genitourinary tract, regional inguinal adenitis, acute osteoarthritis of the dorsal-lumbar vertebrae, mesenteric thrombophlebitis or arterial thrombosus, involvement of the appendix by ascariasis and oxyuriasis, and many other less commonly encountered disorders. The disease, therefore, is very much in existence and to be reckoned with.

In 1941, the death rate from all types of appendicitis was 7.6 per 100,000 in ten southern states. In 1928, North Carolina had a death rate of 10.7 per 100,000, while the United States as a whole recorded 13 per 100,000. In 1952, in these same ten states the mortality has fallen to 1.6 per 100,000. This may well be related to the advent of antibiotics and chemotherapy, but may reflect, in addition, an increased awareness of the problem and the earlier diagnosis thus resulted in the more accomplished surgical treatment of the disorder.

In a review of the patients with perforated appendices operated upon at the Johns Hopkins Hospital, it was seen that one-third were examined by a physician twenty-four or more hours before the operation, and more than 20 per cent of these patients were seen forty-eight hours or more preoperatively. This review suggested that even though 20 to 25 per cent of the patients

[1]Royser, H. A. and Webb, Jr., A.: Appendicitis 1930 to 1955, Am. Surgeon 21:696, 1955.

operated upon for acute appendicitis had normal appendices, this should be regarded not as an unseasonable figure, but as a necessary evil. They emphasize that under this latter group of patients the operation although not productive of an acute appendix, did reveal many other acute surgical conditions which might not have been discovered without operation.

The old adage is quoted that "it is better to take out 100 normal appendices, than to let one perforate." This sounds a great deal like a paraphrase of the similar ratio of the guilty and the innocent so commonly quoted and requoted since Biblical days.

What attitude the average practitioner should take may be debatable. Certainly to be remembered is the fact that there are few with acute appendicitis who have all the classical symptoms and physical findings noted in the average textbook of surgery. This is true, in particular, in two exacting age groups where errors in diagnosis are most apt to prove disastrous,—namely, the very old and the very young. Secondly, it does not seem justifiable to have a diagnostic laxity of one in a hundred. In the third place, it seems desirable to make preoperative diagnoses rather than to trust an exploratory operation for the answer at which time a normal appendix may be removed. Finally, it would be an undesirable return to previous bad practice, if a surge of appendectomies for chronic appendicitis began to appear again.

The surgical pathology statistics of three of the local major hospitals have been investigated. During the last three years there were the following totals for operations for acute appendicitis:

1953	1954	1955
498	509	525

In other words, more than one acutely inflammed appendix is removed in the Nashville area every day.

In addition, the surgical pathology laboratory of one of these hospitals was able to give accurate figures, covering a five year period, relative to the number of operations where acute appendicitis was suspected, but a normal appendix was found. Among 881 of these operations there were 323 normal appendices, a diagnostic inaccurary of 36.7 per cent. This figure is in general agreement with the Johns Hopkins Hospital experience reported above.

It should be emphasized, finally, that even though we have at hand many and varied antibiotics, and chemotherapeutic agents and many and various types of balanced electrolyte solutions for intravenous alimentation, acute appendicitis is strictly a surgical condition and should be sought out promptly and treated as such.

A. W.

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WHAT DO DOCTORS THINK ABOUT THEMSELVES AND ORGANIZED MEDICINE?

In the last issue comment was made on this page upon the public's views in regard to doctors and organized medicine, as culled from the nationwide poll made for the American Medical Association. A simultaneous sample of 500 physicians in private practice was polled for ideas and thoughts to contrast with those of the public. The purpose of this editorial comment is to abstract some of the profession's thinking upon questions raised in the poll.

Though three-fourths of the doctors think well of the A. M. A., it is of interest that 82 per cent think well of the American Dental Association. This may be the result of less unfavorable publicity, since the A. D. A. has not been "in the papers" as has the A. M. A. Another curious fact is that doctors are about equally divided in thinking of their local medical societies as being different than the A. M. A. and those who think of their societies as being a part of the A. M. A.

Relative to public relations, 91 per cent of the doctors feel this is a very important function of the A. M. A., yet only 42 per cent feel it is doing a good job in this field. The half of the doctors who are not satisfied with the public relations blame ill-feeling, unfavorable publicity and public unawareness of the A. M. A. as major shortcomings. (Sixty per cent of doctors feel the A. M. A. has good relations within the profession.) Two-thirds of the profession queried felt that TV was very effective in publicity, more so than radio (50 per cent). Though one-fifth think pamphlets are not effective in public relations, two-thirds of

those polled place A. M. A. pamphlets in their waiting rooms.

It appears that 90 per cent of doctors in private practice are members of the A. M. A. Of internists and surgeons, 95 per cent are members; 88 per cent of general practitioners hold membership in the A. M. A. This membership is higher in the Central and Western states than in the Eastern and Southern. The reasons given for membership in the A. M. A. are,—since it is customary and a doctors' organization in 35 per cent, belief in A. M. A. policies, 13 per cent, and numerous other reasons in smaller percentages. Though 60 per cent of those polled held membership in professional societies unrelated to the A. M. A., almost all were also members of the A. M. A. The reasons many of these are more active in the other professional societies are interest in a specialty, smaller meetings and the social side of the meetings.

Of the 90 per cent who hold A. M. A. membership, about one-half attend most of their local society meetings; 22 per cent attend few or no meetings. The attendance is better in the Western states. About one-fourth of the doctors have attended one to four state or A. M. A. conventions; more meetings are attended by fewer doctors,—for example, only 12 per cent have attended twenty or more such conventions. One in six (16 per cent) have never attended a meeting.

One of the strangest items of the poll is relative to the A. M. A. dues. Of the members only 51 per cent know the correct amount, 21 per cent overestimated and 8 per cent underestimated the amount, and 20 per cent frankly did not know. Of the membership 68 per cent feel they get their money's worth; 21 per cent feel they do not. Of nonmembers 39 per cent do not believe the dues-paying members get value received. The 21 per cent who said they did not get their money's worth gave a number of reasons, the largest, in 3 per cent, being the A. M. A. is "too remote, have no voice in it."

The JOURNAL is mentioned as a service for dues by 75 per cent. Other literature and library services are appreciated by 31 per cent, legislative action by 26 per cent, conventions by 15 per cent, drug research by 9 per cent, counselling advice by 9 per cent, public relations by 8 per cent, and other services in smaller percentages. Two-thirds of the doctors believe the JOURNAL is good, the major objections being in the realm of selection of articles. Twenty-two per cent of those polled feel the A. M. A. is doing a good job in general.

However, an opening to criticism was given by the question, "If you found yourself appointed a top officer in the A. M. A., what changes would you try to put through?" Three-fourths of the doctors answered with the following suggestions in percentages as indicated: get closer to the doctors, poll their ideas (18 per cent); improve public relations, information to the public (14 per cent); social security or pensions for doctors (9 per cent); higher standards for practice (6 per cent); liberalized hospital affiliation requirements (5 per cent); and improvement in the JOURNAL (5 per cent). A number of other suggestions were by smaller percentages. Nine per cent were satisfied with the present status. Eighteen per cent did not know what they would do if placed in the position indicated by the question. These suggestions indicate some of the criticisms which were voiced against organized medicine under the question of whether doctors get their money's worth in A. M. A. dues.

Among the conclusions arrived at in the summary of this A. M. A. poll is one which should be clearly recognized especially by officers of county and state medical societies or associations. This is the need of familiarizing the membership of their respective organizations with the activities of organized medicine, its aims and policies. Some of the criticisms uncovered in this poll obviously reflect ignorance or misunderstanding of concepts on management of the A. M. A.

R. H. K.

DEATHS

Dr. Frank D. Owings, 48, Johnson City, died unexpectedly at his home on March 2nd.

Dr. Clarence Stanley Morrow, 31, died February 21st at the home of his parents in Columbia.

From the Executive Secretary

ORGANIZATIONAL NEWS

TSMA Cancer Committee Meets In Nashville

● The Cancer Committee of the Tennessee State Medical Association met in Nashville on February 24th. A great deal of work had been done by the Committee during the year as revealed in reports presented. Education of the public, cancer forums, and further education of the medical profession on cancer, had been accomplished. Many various organizations, county health departments, schools, PTA Groups, etc. had been reached and enlightened of the cancer danger signals.

The Committee outlined its work for the forthcoming year and one of the main objectives will be to obtain films and other educational material to be presented before county medical societies throughout the State. The Committee directed the Executive Secretary to notify the officers of all county medical societies of the availability of this service and the method to be used in obtaining materials and assistance.

Constitution and By-Laws Committee

● The Committee on Constitution and By-Laws is one that you will be hearing from again. The committee met in Nashville at the Executive Office on March 10th for the purpose of discussing a "modernization" of the existing Constitution and By-Laws of the Association. This Committee had a tremendous job to perform. In a meeting that lasted approximately nine hours, the Committee carefully studied and rewrote many of the provisions in the Constitution and By-Laws while deleting other sections that no longer pertained to the operations of the Tennessee State Medical Association.

This Committee's report was presented to the House of Delegates together with a modernized copy of the Constitution and By-Laws as recommended by the Committee.

Study Committee for UMWA Services Renamed

● Another Committee that has been extremely active since its appointment, has been the Study Committee as originally established by the President to study UMWA services. This Committee has now been renamed and is officially designated as "The Special Study Committee for Expansion of General Practice Services of the UMWA Welfare and Retirement Fund." The function of this committee of the TSMA is most important and far-reaching to all members of the profession in Tennessee. The Committee's report at the House of Delegates outlined in full its objectives and purposes and a Resolution was introduced in the House to officially establish this committee's activities.

May Journal to Be Annual Meeting Reference Number

● You will want to keep the May issue of the Journal. The May issue, as has been the custom in previous years, will be the "annual meeting reference number." It will be a valuable reference for the next full year. The May Journal will carry abstracts of the proceedings of the House of Delegates, Board of Trustees, Officers' Reports and a general summary of the entire 121st annual session of the House of Delegates, which was held in Memphis.

Financial Operating Statement

● Following is a statement of finances, showing the operations of the Association during the year 1955. The statement sets forth the income as budgeted for the fiscal year and the actual expenditures as expended for activities of the Association.

This report is taken from the Annual Audit made by the firm of Osborn & Page, Certified Public Accountants.
From the Audit Report of:
OSBORN & PAGE
Certified Public Accountants

TENNESSEE STATE MEDICAL ASSOCIATION
Budgeted Income and Expenses
Year ended December 31, 1955

Budgeted Income:		
Dues	$52,500.00	
Journal Advertising	19,500.00	
Exhibit Rental	6,600.00	
Miscellaneous Income	400.00	
Property Income	900.00	
Total		$79,900.00
Expenses:		
Organizational Activities		
General:		
Journal	$18,325.57	
Salaries	13,820.89	
Travel	891.73	
Rent	1,504.73	
Telephone and Telegraph	483.86	
Printing	340.33	
Clipping Service	185.39	
Auditing	443.58	
Editor's Honorarium	3,600.00	
Treasurer's Honorarium	100.00	
Committee Expense	848.78	
Board of Trustees	75.02	
Delegates to A.M.A	1,087.26	
Annual Meeting	3,742.07	
Attorney Fees	2,500.00	
Postgraduate Instruction	5,000.00	
Miscellaneous	187.44	
Payroll Taxes	252.26	
President's Expense	315.54	
Postage	357.00	
Stationery and Envelopes	219.30	
Office Supplies and Expense	177.63	
Office Mechines Service	72.40	
Property Taxes and Insurance	245.45	
Building Fund	2,500.00	
Depreciation	524.91	
Contingency Fund	1,074.00	
Total General Expense		$58,876.14
Public Service:		
Salaries	$ 9,750.00	
Travel	2,300.81	
Rent	1,003.09	
Telephone and Telegraph	902.57	
Postage	162.00	
Printing	280.86	
Stationery and Envelopes	177.18	
Office Supplies and Operation	369.80	
Rural Health Conference	200.00	
Annual Meeting	597.74	
Health Project	466.50	
Payroll Taxes	195.00	
Public Relations Course	93.29	
Total Public Service Expenses		$16,312.26
Total Expenses		$75,188.40

Public Service

THE TENNESSEE TEN

Know the People

● "If we are going to succeed in public relations we have to know the people with whom we are going to work." These are the words of Dr. Dwight Murray of Napa, California, President-elect of the American Medical Association. He is a general practitioner who knows what he believes about organized medicine and its place in the United States of America.

Dr. Murray told Kentucky medical society officers at their conference in Lexington March 29 that 7,000 county societies form the foundation of medicine.

"Neither the State society nor the AMA have any power over you," Dr. Murray said. "You, who know the people best, must run your society affairs."

Dr. Murray cited 110 years progress in medical care of the people of this Nation beginning with the founding of the AMA. He pointed out, however, that organized medicine still has its problems, in spite of a record of continuous progress.

"I'm afraid there is a tendency toward complacency," he said. "Many dangers confront us. The present situation calls for constant vigilance."

"The greatest thing doctors can do is in relation to the public. We must be a part of, not apart from the community."

"Meet the people," he admonished the group, "know how they live. Miss no opportunity to talk to civic clubs. Take all opportunities to meet the people."

He praised the work of the woman's auxiliary for the job they have done in making the public realize that doctors are trying to do the best possible job for the health of the people.

In discussing the tendency on the part of the public to criticize organized medicine, he advised: "Take the time and the patience to inform the public on organized medicine. By taking a little time you may be able to correct these attitudes. They can be corrected everywhere, in hospitals, in offices, and elsewhere."

"Third Party Medicine"

● Naming ways to stop "third party medicine" in the form of corporation owned and operated clinics and hospitals, Dr. Murray advised physicians to give better service and to give each patient a little more time. "Don't put expense ahead of time," he warned.

Press Relations

● He urged members of county societies to work for good press relations. "Good press relations are easy to develop in small towns," he said. "Get to know new reporters. Let newsmen know you will give them the news and tell them as nearly as possible what happens."

He added that telling the press in a general way what the condition of a patient is, without going into unnecessary detail, will almost always give the newspapers what they need.

In closing he praised Kentucky State Medical Association Executive-Secretary Joe Sanford for his job in organizing the officers conference. The meeting was devoted chiefly to public relations and legislation affecting medicine.

"Nothing but good can come from meetings such as these," Dr. Murray concluded.

Sharing places on the program with Dr. Murray were Leo Brown, Public Relations Director for AMA; Jerry Pettis, Assistant to the President, Los Angeles County, California Medical Society; Dr. Alfred Chadwick, New Brighton, Pennsylvania; Dr. David Allman, Chairman, AMA Legislative Committee; William McGrath, Cincinnati, Ohio, Employer's Delegate to the International Labor Organization; and Dr. C. Allen Payne, Grand Rapids, Michigan.

The General Theme

● The general theme of the one-day meeting was that good medical public relations must begin with the physician himself. No amount of promotion through radio, television, and newspaper media can create favorable public relations if the doctor-patient, doctor-public relationship is sour. "We have to know the people with whom we are going to work," Dr. Murray said, and in so doing he expressed the sum and total of a well planned and successful county society officers' conference.

Medical Education Week

● Medical Education Week, April 22-28, comes ten days after the close of the annual TSMA meeting in Memphis. The observance will see a tribute paid to Tennessee medical schools and medical educators through all information media.

Seventy-four TSMA members, auxiliary members, and county society employees are cooperating in preparations for the observance.

In this first nation-wide effort to bring the story of American medical schools to the public, these Chairmen are to be congratulated for an excellent job. Due to their cooperation it will be possible to take the story of medical education to every community in Tennessee.

Powell Amendment Trend May Kill Medical Appropriations

● Dr. David Allman, Chairman of the AMA Legislative Committee, observed recently that the "Powell Amendment," which would prohibit the use of Federal tax money for segregated school systems, may have set a precedent which could hamstring Federal appropriations for medical schools and perhaps wreck the present Hill-Burton Act.

Dr. Allman pointed out that amendments similar to the one backed on a proposed federal school-aid bill by Representative Adam C. Powell, Jr., Democrat from New York City, are almost sure to be tagged to future appropriations for Federal health and hospital programs.

Dr. J. R. Moody, 60, Erwin, died February 28th at the Unicoi County Memorial Hospital. Dr. Moody was a former Mayor of Erwin.

Dr. Jesse Peyton David, 68, Henning, died on February 14th.

Dr. Thomas W. Menees, 77, Nashville, died February 13th in the Clarkston Hotel.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Roane County Medical Society

The Society met on February 28th in the dining room of the Oak Ridge Hospital. The program consisted of a paper entitled "Head Injuries" by Dr. W. Edison Smith of Knoxville.

Nashville Academy of Medicine and Davidson County Medical Society

The regular meeting was held on March 13th at the Baptist Hospital where dinner was served. The scientific program consisted of a paper entitled "The Tonsil and Adenoid Problem," by Dr. William G. Kennon, and a "Review of the Treatment of Acute Leukemias," by Dr. Morse Kochtitzky.

Knoxville Academy of Medicine

The Academy met on March 13th. An interesting case report was given by Dr. H. Hammond Pride. Guest speaker was Dr. L. W. Diggs of the University of Tennessee Medical School in Memphis who delivered a paper on "Maximal Use, Minimal Abuse of Laboratory Procedures in the Practice of Medicine."

Chattanooga and Hamilton County Medical Society

The Society met on March 1st at the Chattanooga Golf and Country Club to hear a heart symposium under the auspices of the Chattanooga area Heart Association. Guest speakers were: Dr. George E. Burch of Tulane University, Dr. Sam Bellett of the University of Pennsylvania and Dr. Gilbert Campbell of the University of Michigan.

On March 16th the meeting was held in the Interstate Building where Dr. I. V. Ponseti was the guest speaker. Dr. Ponseti is from the University of Iowa Medical School and the subject of his talk was "Hip Disorders in Children."

Memphis-Shelby County Medical Society

The Society met on February 7th in the Institute of Pathology, where Dr. Tinsley Harrison of the Medical College of Alabama at Birmingham was the guest speaker. The program was sponsored by the Memphis Heart Association. Dr. Harrison's subject was "Palpation of the Precordium."

Sumner County Medical Society

The Sumner County Medical Society held its regular monthly meeting on February 13th at the Cordell Hull Hotel. Dr. Charles Fiman, Madison, was the guest speaker and his subject was "Psychiatry in General Practice." The highlight of the meeting was that all members voted unanimously for the Society to lend its efforts toward the procurement of a 50-bed Hill-Burton hospital.

Warren County Medical Society

The Society met on February 20th. The scientific program was given by Dr. R. L. Dubussion of Nashville, who discussed the subject "New Developments in Pediatrics."

Consolidated Medical Assembly

The Consolidated Medical Assembly held its regular monthly meeting on March 6th at the New Southern Hotel. Dr. John W. Riddler, Jackson, read a paper on "Acute Cholecystitis." His paper was discussed by Dr. E. W. Edwards.

NATIONAL NEWS

AMA Board Commends President on Message

The A. M. A. Board of Trustees, meeting in Chicago recently, drafted a letter to President Eisenhower, commending him on the health and medical care programs set forth in his health message to Congress.

The letter, a copy of which was sent to Marion B. Folsom, Secretary of Health, Education and Welfare, follows in full:

"The Board of Trustees of the American Medical Association unanimously voiced its approval

of the principal health and medical care programs set forth in your recent Health Message to the Congress.

"Your recognition of the tremendous growth of voluntary health insurance and the recommended removal of existing legal restrictions to pooling efforts were most encouraging to us.

"Your recommendation with respect to medical research and medical education as embodied in H.R. 9013, 84th Congress, has been approved by the Board of Trustees. We are grateful that the objections which we raised to similar legislation last year have been considered in drafting the present bill.

"On your recommendation for a sickness survey we concur in your view that a survey should be made but recommend that it should be made at reasonable periodic intervals rather than as a continuing survey as suggested in H.R. 9014, 84th Congress.

"In our opinion the administration's health program is in general a sound approach to a solution of the problems in the health field. We pledge to you and the Congress our continued cooperation."

AMA Report on Nationwide Survey of County Society Activities

Activities sponsored by the nation's county medical societies ran the gamut from control of alcoholism to venereal disease detection during 1954-55, a recent American Medical Association survey concluded. Nearly 64 per cent of the county medical societies in the United States and its territories replied to a questionnaire on their professional, educational and community programs, circulated by the AMA's Council on Medical Service. This survey report reveals a growing awareness by both large and small societies of the need for more participation in community affairs.

Following is a summary of the statistics contained in this report:

MEETINGS—More specialty society, postgraduate and hospital staff meetings have tended to minimize the importance of the county society scientific meeting although more than 95 per cent of the societies meet regularly. Socio-economic aspects of medicine are becoming increasingly important as meeting topics. Increase in attendance was particularly noted by the larger societies although average attendance reached its highest percentage in the smaller societies.

ACTIVITIES—To serve the individual physician member, the public and allied health groups most effectively, medical societies have organized special committees. The size of the society determines, in a large measure, the extent of its activities.

SOCIETY PUBLICATIONS—Society bulletins and journals serve as records of official business, meeting reminders and a way of disseminating scientific and socio-economic information.

PUBLIC EDUCATION PROGRAMS — Besides providing medical services, medical societies are recognizing a growing need to interpret these activities for the layman. The speakers bureau, sponsored by 240 societies, is the most popular outlet.

COMMUNITY PROGRAMS—County societies also participate in programs sponsored by local and state voluntary and governmental agencies. Most prevalent are indigent care programs, reported by 614 societies. In addition, nearly 400 societies report that they state publicly that persons who cannot pay need not go without the services of a physician. Use of average or usual fee schedules was reported by 654 societies, use of medical social service workers by 21 societies.

PERSONNEL, BUILDING, FINANCES — Society activities and responsibilities have increased so greatly, especially in the larger groups, that full time executive personnel often is needed to help conduct society business. A direct relationship between size of society and amount of its dues can be noted from the survey. In the higher dues bracket, 57 societies reported dues of more than $40 in 1954; 40 of these societies have more than 100 members. Sixty-eight societies reported dues in that bracket in 1955; 43 of these societies have more than 100 members.

H.R. 9429 (Supersedes H.R. 7994)

All doctors of medicine will be interested in the above Bill. This Bill was proposed and introduced by the Chairman of the Sub-Committee that conducted public hearings early in March. (Representative Kilday, D-Texas.) The Bill would uniformly provide medical services for dependents of the members of the Armed Forces, Public Health Service, Coast Guard, and Coast and Geodetic Survey. Care would be rendered either in facilities of the uniformed services or through subsidized health care in private facilities and from private providers. Uniform changes for subsistance given dependents in connection with government facility provided hospital care would be mandatory. Minimum charges could be imposed for out-patient care.

The AMA is opposed to that provision of the Bill which could deprive the wife and children dependents of the right to elect contracted-for medical service in areas where military facilities are adequate.

The House Committee has favorably reported this Bill and the Rules Committee on February 27 cleared the Bill for floor debate.

MEDICAL NEWS IN TENNESSEE

Certificate Awarded Meharry Medical College

Dr. Charles C. Trabue, IV, President of the Tennessee State Medical Association,

presented a certificate of special merit for television pioneering to Meharry Medical College on February 27th, following a live ABC network telecast from the College. "Medical Horizons," a television series sponsored by Ciba Pharmaceutical Company, reached an estimated seven million persons with the half hour program telecast. The program dramatized research work now in progress at Meharry with radioactive gold in the treatment of cancer.

Dr. Harold D. West, President of Meharry, received the AMA award on behalf of the College.

Memphis Becoming Major Medical Center

Memphis is gaining increasing nationwide recognition as a medical care and education center, Dr. Jack Masur, assistant surgeon general and chief of the U. S. Bureau of Medical Services, recently stated.

There are in Memphis an enormous number of resources for medical education, the U. S. Public Health Service official stated. This fact, plus hospital expansion programs, promises to make Memphis an extremely important medical center.

Seventh District Meeting of American Academy of Obstetrics and Gynecology

A number of important clinical problems in obstetrics and gynecology were discussed when the Seventh District meeting was held in Memphis on March 9 and 10. Papers presented were: Sudden Death in Pregnancy Due to Sickle Cell Trait, by Dr. John Q. Adams, Memphis; Carcinoma in Situ, by Dr. William J. Hegedus of Amarillo, Texas; and The Grievance Committee's Most Frequent Guests—the Obstetrician and Gynecologist, by Dr. George E. Rohrer of Houston, Texas.

Luncheon discussions were led by Dr. Edwin G. Waldrop and Dr. Paul S. Woodhall of Birmingham; Dr. George J. Wulff, Jr., of St. Louis; Dr. Frank B. Whitacre of Nashville; Dr. C. G. Sutherland of Jackson, Miss.; Dr. C. Paul Hodgkinson of Detroit; Dr. Harold Feinstein of Memphis; and Dr. Norman L. Gardner of Houston.

Memphis Eye, Ear, Nose and Throat Convention

Diseases of the eye were discussed recently in the meeting of the Memphis Eye, Ear, Nose and Throat Convention. Dr. Harvey E. Thorpe, ophthalmologist-in-chief of Montefiore Hospital in Pittsburgh, was one of the six eminent specialists addressing the convention. Other speakers were: Dr. Georgiana Dvorak-Theobald of Oak Park, Illinois; Dr. Alson E. Braley of Iowa City, Iowa; Dr. D. E. Staunton Wisehart of Toronto, Canada; Dr. Edmund P. Fowler, Jr., of New York; and Dr. Alden H. Miller of Los Angeles. Other talks on subjects were presented relating to diagnosis and treatment of diseases of the eye, ear, nose and throat.

Medical Forum Presented

The Blount County Medical Society presented a medical forum on March 8th in the Maryville High School auditorium. A large crowd was present and subjects and questions of interest were presented by doctors of Maryville to those in attendance at the forum.

University of Tennessee College of Medicine

Appointment of four Memphis physicians to the staff of the University of Tennessee College of Medicine and the promotion of four others were announced recently. Appointed assistants were Dr. Elmer W. Sydner, Jr., and Dr. Stephen A. Pridgen, department of surgery, and Dr. John L. Hobson and Dr. Earl V. Schariff, division of internal medicine. Promoted from instructor to assistant professor were Dr. R. F. Ackerman, division of preventive medicine and Dr. C. D. Hawkess, department of surgery. Advanced from assistants to instructors in the department of dermatology were Dr. Fox Miller and Dr. J. W. Baird.

Dr. William A. McClellan, general practitioner of Oxford, Ohio, for the past seven years, has joined the staff of the University of Tennessee College of Medicine as assistant director of the Department of General Practice.

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The University of Tennessee College of Medicine has next to the lowest income per student enrolled, figures compiled by the National Fund for Medical Education revealed. The College, with 802 students, has an income of $1,367.00 per student. The

economical operation of the College is made possible in a large measure by the four-quarter system of operation, Dr. O. W. Hyman, vice-president in charge of the medical unit, stated.

John Sevier Chapter—AAGP

The John Sevier Chapter of the American Academy of General Practice held a dinner meeting on February 16th at the Hotel Erwin in Erwin, Tennessee. Dr. John Hall of Johnson City, was the guest speaker.

PERSONAL NEWS

Dr. J. Wesley McKinney, Memphis, has been elected Executive Secretary for North of Panama, for the Pan American Association of Ophthalmology.

Dr. C. M. Looney, Springfield, has taken up a residency in surgery at the Nashville General Hospital.

Dr. Charles C. King, Memphis, has received an award for outstanding service given by the American Cancer Society. The award was made by **Dr. Ralph R. Braund**, Memphis, President of the Tennessee Division of the American Cancer Society.

Dr. Frank London, Knoxville, representing the American Heart Institute, was a recent speaker before the Kiwanis Club.

Dr. Oscar N. Torian, Sewanee, has been named "Outstanding Citizen of 1955 in Franklin County."

Dr. Avery T. King, Oak Ridge, has taken over duties as Urologist at the Oak Ridge Hospital.

Dr. Robert M. Finks, Nashville, has been named Chief of Staff of the Baptist Hospital in Nashville. Other Nashville physicians named to chiefs of services at the Hospital are **Dr. Harry Moore**, anesthesiology; **Dr. Leslie Rowe Driver**, eye, ear, nose and throat; **Dr. J. A. Kirtley, Jr.**, general surgery; **Dr. R. K. Galloway**, general practice; **Dr. J. Lanier Wyatt**, internal medicine; **Dr. Scott Bayer**, obstetrics-gynecology; **Dr. George K. Carpenter**, orthopedic; **Dr. Frank Womack**, pathology; **Dr. E. E. Wilkinson**, pediatrics; **Dr. J. M. Ivie**, roentgenology; **Dr. C. E. Haines**, urology.

Dr. Carolyn Beard, Maryville, has assumed the duties as Director of the Blount County Health Department. She replaced **Dr. W. N. Dawson**, resigned.

Dr. Dan Thomas, Knoxville, is the new President of the Knoxville Welsh Society.

Dr. Park Niceley, Knoxville, has been elected to the International College of Surgeons.

Dr. George L. Sivils, Chattanooga, was a recent participant in a television program.

Dr. C. B. Roberts, Sparta, was the recent guest speaker at the District 9, Tennessee Nurses Association.

Dr. Mary E. Thompson, McMinnville, was the subject of a recent Newspaper Feature Story.

Dr. DeWitt Owen, Franklin, has recently purchased the Schell Hospital in Franklin.

Dr. R. B. Wood, Dr. Joseph Acker, Jr., Dr. Bruce McCampbell, Dr. W. K. Swann and **Dr. Richard Sexton, Jr.**, all of Knoxville, recently participated in "Heart Sunday" sponsored by the East Tennessee Heart Association.

Dr. Robert E. McCall, Kingsport, has announced the opening of his office for the practice of general and thoracic surgery.

Dr. F. Tremaine Billings, Nashville, has been nominated to serve on the Princeton University Board of Trust.

A panel on heart disease that appeared before the Chattanooga Civitan Club recently was composed of **Dr. Joseph W. Johnson**, Moderator. Panelists included **Dr. Foster Hampton, Dr. Phillip H. Livingston, Dr. Carl Hartung** and **Dr. David McCallie.** All are from Chattanooga.

Dr. Gerald Johnson, Winchester, has been named the first president of the Franklin County Chapter of the American Cancer Society.

Dr. R. L. Maloney, McMinnville, has been named winner of the VFW Citizenship Award for 1956.

Dr. H. G. Edmonson, Martin, was a recent speaker before the Martin Health Council.

Dr. William G. Stephenson, Chattanooga, has been named Vice-President of the Mid-South Postgraduate Medical Assembly.

Dr. Grace Moulder and **Dr. Carl Rogers**, Shelbyville, are assisting in the Red Cross Blood Drive in that city.

Dr. Albert S. Easley, Chattanooga, was the recent speaker before the Chattanooga Council for Retarded Children.

Dr. B. M. Overholt and **Dr. J. E. Acker, Jr.**, both of Knoxville, were recent speakers before the District Dental Society.

Dr. L. W. Nabers, Morristown, has been installed as President of the Mid-South Postgraduate Medical Assembly.

Dr. K. M. Kressenberg, Pulaski, has been reelected President of the Giles County Medical Society. Other officers named were **Dr. D. M. Spotwood**, vice-president; and **Dr. Harvill Hite**, secretary.

Dr. Clarence S. Thomas, Nashville, has announced the removal of his office to 113 Louise Avenue to continue in practice limited to internal medicine, allergy.

Dr. Arnold Meirowsky, Nashville, has learned that his father, Dr. Emil Meirowsky, has been honored upon his eightieth birthday by the Society of Investigative Dermatology, of which he is an Honorary Member, for his past and continued contributions in dermatologic research especially in the field of melanin in the skin. Now Professor Emeritus in Dermatology, School of Medicine, University of Cologne, Germany, Dr. Meirowsky had

continued his research at the University of Indiana Medical School, before moving to Nashville to live with his son.

ANNOUNCEMENTS

American Board of Obstetrics and Gynecology

Applications for certification (American Board of Obstetrics and Gynecology) for the 1957 Part I Examinations are now being accepted. Candidates are urged to make such application at the earliest possible date. Deadline date for receipt of applications is October 1, 1956.

All candidates for admission to the Examinations are required to submit with their application, a plain typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application or the year prior to their request for reopening of their application.

Application for re-examination, as well as requests for resubmission of case abstracts, must be made to the Secretary prior to October 1, 1956. Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

Tennessee State Dental Association

The Association will meet in Memphis, April 30 to May 3. A cordial invitation is extended to all members of the Tennessee State Medical Association to attend the sessions.

On Tuesday, May 1, 2 p.m., there will be a discussion of oral cancer by a panel of five,—Dr. David S. Carroll, associate professor of radiology, and Dr. Joe Chisolm, instructor in preventive medicine, both of the University of Tennessee College of Medicine. The other panelists are Dr. James R. Cameron, professor of oral surgery at Temple University School of Dentistry; Dr. Irving Glickman, professor of oral pathology and periodontology at Tufts University School of Dental Medicine, and Dr. Joseph L. Bernier, chief of the dental and oral pathology branch of the Armed Forces Institute of Pathology.

On Thursday, May 3, 9:00, Mr. M. Jules King of St. Louis, Missouri, will speak on "Economics for Professional Men." He will deal with many aspects of practice and personal economics under two broad headings, financial analysis and financial security. Both sessions will be held in the Continental Ballroom of the Hotel Peabody.

The Society of Medical Assistants of Nashville and Davidson County

An organizational meeting will be held at the Hermitage Hotel in Nashville on May 5 and 6 to formulate plans for a State Association of Medical Assistants. Beginning with an Open House on May 4 at 5:00 P.M., the meeting will continue through May 5 and 6 with discussions on organization and constitution. A banquet is scheduled for Saturday evening, May 5. All medical assistants in Tennessee are invited.

TENNESSEE STATE MEDICAL ASSOCIATION COMMITTEES, 1956

STANDING COMMITTEES

Scientific Work and Editorial Board—R. H. Kampmeier, Chairman, Nashville; Lamb B. Myhr, Jackson; Henry B. Gotten, Memphis; B. O. Garner, Union City; Harwell Wilson, Memphis; John H. Burkhart, Knoxville; E. White Patton, Chattanooga; H. L. Monroe, Erwin; Addison B. Scoville, Jr., Nashville; W. N. Cook, Columbia.

Hospitals—Edward T. Brading, Chairman, Johnson City (1956); John W. Adams, Jr., Chattanooga (1958); R. H. Haralson, Maryville (1956); C. H. Heacock, Memphis (1957); Ralph H. Monger, Knoxville (1957); W. W. Tribby, Memphis (1958); Joseph McK. Ivie, Nashville (1958).

Legislative and Public Policy—C. M. Hamilton, Chairman, Nashville (1956); J. B. Killebrew, Chattanooga (1958); H. L. Pope, Knoxville (1957); T. R. Ray, Shelbyville (1958); James B. Stanford, Memphis (1956); R. H. Kampmeier, ex officio, Nashville; Charles C. Trabue IV, ex officio, Nashville.

Liaison (Public Health Department)—J. O. Manier, Chairman, Nashville (1956); John B. Steele, Vice-Chairman, Chattanooga (1957); James M. Bethea, Memphis (1958); Carl E. Adams, Murfreesboro (1957); William A. Garrott, Cleveland (1958).

Insurance—B. F. Byrd, Sr., Chairman, Nashville (1957); Edward D. Mitchell, Jr., Memphis (1956); George L. Inge, Knoxville (1958).

Memoirs—Henry L. Douglass, Chairman, Nashville (1956); John C. Pearce, Jackson (1957).

Symposium Committee on Postgraduate Instruction.—F. L. Roberts, Chairman, Memphis; James G. Hughes, Memphis; John B. Youmans, Nashville; Julian K. Welch, Brownsville; Frank E. Whitacre, Nashville; Kenneth P. Brown, Lewisburg; J. T. Moore, Jr., Algood; William A. Garrott, Cleveland; Van Fletcher, Chattanooga; Charles Sienknecht, Knoxville; L. A. Killeffer, Harriman; Ben L. Pentecost, Memphis; A. Fount Russell, Clarksville; Malcolm Tipton, Union City; George L. Smith, Winchester; Ralph E. Cross, Johnson City.

Cancer—Ralph H. Monger, Chairman, Knoxville (1958); R. L. Sanders, Memphis (1957); C. H. Heacock, Memphis (1956); Louis Rosenfeld, Nashville (1958); C. S. McMurray, Nashville (1957); S. S. Marshbanks, Chattanooga (1956).

Advisory Committee to State Department of Public Welfare—W. W. Hubbard, Chairman, Nashville (1957); R. H. Kampmeier, Nashville (1956); Ernest G. Kelly, Memphis (1958); Carl A. Hartung, Chattanooga (1958); J. N. Thomasson, ex officio, Nashville (1959).

Grievance Committee—Daugh W. Smith, Chairman, Nashville (1956); A. M. Patterson, Chattanooga (1957); John R. Thompson, Jr., Jackson (1958).

Physical Therapy—George W. Shelton, Chairman, Chattanooga; S. Ben Fowler, Nashville; Marcus J. Stewart, Memphis.

SPECIAL COMMITTEES

General Practice—E. L. Caudill Jr., Chairman, Elizbethton (1957); J. Paul Baird, Dyersburg (1956); O. Reed Hill, Lebanon (1958).

Emergency Medical Service—Frank Moore, Chairman, Jackson; Moore Moore, Jr., Memphis; R. A. Light, Nashville; W. C. Dixon, ex officio, Nashville; Joe L. Raulston, Jr., Knoxville; R. C. Robertson, Chattanooga.

Industrial Health—Thomas A. Lincoln, Chairman, Oak Ridge (1957); C. N. Gessler, Nashville (1958); Otis S. Warr, Memphis (1956).

Prepaid Insurance—N. S. Shofner, Chairman, Nashville; Mr. John T. O'Connor, Knoxville; Mr. Clyde York, Columbia; Mr. R. H. Peoples, Memphis; George L. Inge, Knoxville; J. P. Sloan, Jamestown; Joseph W. Johnson, Jr., Chattanooga; W. C. Chaney, Memphis; Mr. A. J. Baird, Nashville; R. H. Kampmeier, Nashville.

Executive Subcommittee: (Prepaid Insurance)—N. S. Shofner, Chairman, Nashville; D. W. Smith, Nashville; Robert M. Finks, Nashville; Mr. Charles L. Cornelius, Sr., Nashville; John R. Glover, Sr., Nashville.

Public Service—L. W. Edwards, Chairman, Nashville (1957); H. L. Monroe, Vice-Chairman, Erwin (1956); C. C. Smeltzer, Knoxville (1958); W. A. Garrott, Cleveland (1957); Thurman Shipley, Cookeville (1956); W. K. Owen, Pulaski (1958); W. N. Cook, Columbia (1957); J. R. Thompson, Jr., Jackson (1956); J. Paul Baird, Dyersburg (1958); Harold B. Boyd, Memphis (1957).

Members State-at-Large—J. O. Manier, Nashville (1956); C. B. Roberts, Sparta (1958); W. C. Chaney, Memphis (1957); R. B. Wood, Knoxville (1956); J. Marsh Frere, Chattanooga (1958); John M. Lee, Nashville (1957).

Executive Sub-Committee—L. W. Edwards, Nashville (1957); J. O. Manier, Nashville (1956); Charles C. Trabue IV, Nashville (1958).

Liaison Committee to the United Mine Workers of America—B. M. Overholt, Chairman, Knoxville (1958); Cecil E. Newell, Chattanooga (1956); J. S. Hall, Clinton (1957).

Advisory Committee to Woman's Auxiliary—W. W. Hubbard, Chairman, Nashville; John M. Wilson, Johnson City; E. Park Niceley, Knoxville; Roy A. Douglass, Huntingdon; Lynch D. Bennett, Nashville.

Veterans Affairs—J. Paul Baird, Vice-Chairman, Dyersburg; L. W. Edwards, Nashville; J. B. Naive, Knoxville; W. C. Chaney, Memphis; Ralph E. Cross, Johnson City; H. D. Hickey, Chattanooga; W. I. Proffitt, Cleveland; T. R. Ray, Shelbyville; Thurman Shipley, Cookeville; E. P. Cutter, Clarksville; George D. Dodson, Jr., Jackson; John E. Cox, Memphis; Ray O. Fessey, Nashville.

Tuberculosis Committee—Robert L. McCracken, Chairman, Nashville; Foster Hampton, Jr., Chattanooga; Joe L. Raulston, Knoxville; Hollis E. Johnson, Nashville; Duane M. Carr, Memphis; R. David Taylor, Dyersburg; R. B. Turnbull, Memphis.

Rural Health Committee—William N. Cook, Chairman, Columbia (1957); Rae B. Gibson, Greeneville (1957); James S. Hall, Clinton (1956); Henry T. Kirby-Smith, Sewanee (1958); Thurman Shipley, Cookeville (1957); T. G. Cranwell, Pikeville (1956); James A. Loveless, Gallatin (1958); Hunter Steadman, Henderson (1956); Warren C. Ramer, Lexington (1958); J. T. Carter, Jr., Germantown (1957).

Blood Bank—M. L. Trumbull, Chairman, Memphis; David K. Gotwald, Nashville; John W. Adams ,Chattanooga.

Mental Health—Frank Luton, Chairman, Nashville; Robert M. Foote, Nashville; O. S. Hauk, Nashville; Carrol C. Turner, Memphis; Joseph W. Johnson, Jr., Chattanooga.

Autopsy Committee—Leland M. Johnston, Chairman, Jackson; W. W. Huretau, Memphis; George S. Mahon, Knoxville; David Gotwald, Nashville; C. B. Roberts, Sparta.

Health Project Contest—Mrs. Oliver Graves, Chairman, Jackson; C. B. Roberts, Sparta; Daugh W. Smith, Nashville; Mrs. Robert Morris, Medina.

Labor Liaison—Daugh W. Smith, Chairman, Nashville; John D. Winebrenner, Knoxville; William E. Van Order, Chattanooga; Baker Hubbard, Jackson; H. L. Monroe, Erwin.

Legal Liaison to State Bar Association—George K. Carpenter, Chairman, Nashville; Edward T. Newell, Jr., Chattanooga; Joe L. Raulston, Jr., Knoxville; D. C. McCool, Memphis; W. A. McLeod, Jr., Johnson City; John C. Pearce, Jackson.

Liaison Committee to Public Health Council—L. W. Edwards, Chairman, Nashville; R. H. Kampmeier, Nashville; Charles C. Trabue IV, Nashville.

Liaison to Tennessee State Dental Association—R. David Taylor, Chairman, Dyersburg; James C. Gardner, Nashville; Roy L. McDonald, Knoxville.

Liability Insurance Study Committee—Carrol C. Turner, Chairman, Memphis; W. C. Dixon, Nashville; J. Hughes Chandler, Jackson; N. J. Chew, Bristol; Sam Hay, Murfreesboro; John E. Kesterson, Knoxville; James A. Kirtley, Jr., Nashville; Ben L. Pentecost, Memphis; William J. Sheridan, Chattanooga.

TSMA-Headquarters Building Committee—Daugh W. Smith, Chairman, Nashville; Charles C. Trabue IV, Nashville; R. H. Kampmeier, Nashville.

Committee on Constitution and By-Laws—John R. Thompson, Jr., Chairman, Jackson; J. B. Stanford, Memphis; A. M. Patterson, Chattanooga; William A. Garrott, Cleveland; W. N. Cook, Columbia; J. Paul Baird, Dyersburg; Oscar F. Noel, Nashville; Walter D. Hankins, Johnson City; A. Fount Russell, Clarksville.

Study Committee on Postgraduate Education Program—H. L. Monroe, Chairman, Erwin; John B. Youmans, Nashville; R. H. Kampmeier, Nashville; F. L. Roberts, Memphis; Ben L. Pentecost, Memphis; William A. Hensley, Cookeville; Julian K. Welch, Brownsville; L. A Killeffer, Harriman; W. K. Owen, Pulaski.

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Abstract of the Proceedings of the House of Delegates of the Tennessee State Medical Association Memphis, April 8-10, 1956

FIRST SESSION, SUNDAY, APRIL 8

The First Session of the House of Delegates was called to order at 2:00 p.m. in the Cadet Room of the Hotel Peabody in Memphis with the Speaker of the House, Dr. Robert N. Buchanan, Jr., of Nashville, presiding. The invocation was rendered by Dr. A. W. Dick, Pastor, Second Presbyterian Church, Memphis. Prayer of Dr. Dick: "Our Heavenly Father, thou who are the giver of every good and perfect gift and thou who dost inspire the hearts of all of those who serve thee, as we open this meeting we pray that thou wilt give to these doctors, physicians and surgeons, a fresh sense of their privilege and a keen awareness of their responsibilities. Grant to them, we pray thee, Thy special blessing that through these days they may be even better prepared for those who are sick and afflicted. Give faithfulness and skill to their work in diagnosis and in the effectiveness of the means that they employ and help them to realize anew that in their best service they are serving Thee. We remember with gratitude that when Jesus was here on earth that he not only touched the souls of men and women bringing them out of darkness into spiritual light but that he touched bodies that were sick with his healing power.

"Therefore we make this our prayer, in the name of the divine physician, Jesus Christ, our Lord. Amen."

The Speaker called upon Dr. Louis A. Killeffer, Chairman of the Credentials Committee, to determine if a quorum was present and the Credentials Committee Chairman recommended a roll call.

The Speaker directed that the Executive Secretary call the roll and the delegates were polled by County Society representation, with the delegates' name being read first, and if not present, the name of the alternate delegate was called.

With completion of the roll call, Dr. Killeffer stated that a quorum was present.

The minutes of the previous session were approved as published in the May, 1955, issue of the JOURNAL.

Speaker of the House, Buchanan, then announced the personnel of the several reference committees previously appointed and which are as follows:

Committee on Credentials

Louis A. Killeffer, M.D., Chairman
A. Fount Russell, M.D.
Julian K. Welch, M.D.

Committee on Amendments to the Constitution and By-Laws

John R. Thompson, Jr., M.D., Chairman
J. B. Stanford, M.D.
Louis Rosenfeld, M.D.

Committee on Resolutions

E. Charles Sienknecht, M.D., Chairman
Leland M. Johnston, M.D.
Laurence A. Grossman, M.D.

Committee on Reports of Officers

J. Malcolm Aste, M.D., Chairman
Guy M. Francis, M.D.
J. Harvill Hite, Jr., M.D.

Committee on Reports of Committees

B. M. Overholt, M.D., Chairman
Robert M. Finks, M.D.
S. Fred Strain, M.D.

Outstanding G. P. Award Committee

Daugh W. Smith, M.D., Chairman

A. M. Patterson, M.D.
John R. Thompson, Jr., M.D.

In the absence of Dr. John B. Youmans on the Reference Committee on Amendments to the Constitution and By-Laws, the Speaker named Dr. Louis Rosenfeld of Nashville to serve in his place. Dr. Rosenfeld agreed and it was so ordered.

The Speaker called for petitions of new Charters of County Medical Societies and the Executive Secretary reported that no petitions had been submitted to him or the Council to charter a new Society.

Amendments on the Table

The next order of business was the consideration of Constitutional Amendments which had remained on the table since the last annual session. The Speaker explained the Amendment to the Constitution and called upon the Executive Secretary to read the proposed amendment.

The proposed amendment would amend Article VII, Section 2, to read as follows: "The scientific sessions shall begin on Thursday following the second Tuesday in April, except as provided in Chapter II, Section 3, of the By-Laws. The Sections shall determine the dates of their meeting."

The Speaker called for discussion, after which he called for a motion. The motion to adopt was made by Dr. H. L. Monroe of Erwin and seconded by Dr. C. M. Hamilton of Nashville.

Speaker Buchanan explained that parallel amendments to the By-Laws in 1955 were defeated. A question arose from the floor relative to the date of mailing of the proposed amendment on the Table, but this matter was clarified by the Speaker.

Dr. John R. Thompson stated that the Committee of which he was Chairman, the Committee on Constitution and By-Laws, would make a recommendation later in the day which would cover the Article to be voted upon and it was his suggestion that the amendment be defeated since the provision would be covered in the By-Laws, hereafter.

The question was called for and the Speaker put the Amendment to vote. Following the voting, the Speaker announced that the motion failed to carry and that **the amendment was not adopted.**

Introduction of Amendments

Speaker Buchanan called for the introduction of any proposed amendments to the Constitution or By-Laws. None were presented. However, Dr. John R. Thompson stated that when his Committee reported on the Study of the Constitution and By-Laws, there would be a number of proposed amendments both to the Constitution and By-Laws and these would be made at the time that his Committee reported.

Introduction of Resolutions

The Speaker then stated that the next order of business was the introduction of resolutions. Delegates should not discuss nor debate the resolutions at the time of introduction, but should simply read them in order that the Chair could get the resolutions before the proper reference committee. The Speaker suggested that all of those interested in resolutions that were introduced should appear before the Reference Committee on Resolutions and express their feelings about them. It was stated that full opportunity would be given for debate and discussion when the resolutions are reported out by the Reference Committee on Resolutions on Tuesday, April 10.

Dr. Daugh W. Smith, Nashville, introduced a resolution relative to the establishment of a memorial trust fund. The resolution stated that the Tennessee State Medical Association be asked to endorse such contributions as both worthy of purpose and gratifying to the bereaved and that the TSMA qualify to accept and administer such funds as a memorial trust. Further, that all gifts received be preserved and invested so as to form the corpus of a permanent trust, and that the income from the trust be given each year to a medical charity within the State of Tennesse. The resolution was referred to the Reference Committee on Resolutions.

Dr. Charles C. Trabue, IV, Nashville, introduced a resolution pointing out that membership in the State Medical Association was increasing and also that membership in the American Medical Association was decreasing. It was further stated that membership in the AMA must be maintained at 2,000 or more members or the TSMA would lose one of its delegates in the

House of Delegates of the AMA. The House of Delegates was asked to go on record as urging every member of the Tennessee State Medical Association to also become a member of the AMA and that the Secretary of each component medical society be sent a copy of this resolution. The resolution was referred to the Reference Committee on Resolutions.

Dr. Charles C. Trabue, IV, introduced another resolution setting forth the increasing need for closer liaison between county, state and national levels of organized medicine. His resolution urged that the House of Delegates recommend to the Board of Trustees to investigate and if found feasible, take necessary steps to set up proper committees and other machinery to conduct a state-wide county medical society officers conference, to be held at a place and time that will best accomplish the intended purposes. This resolution was referred to the Reference Committee on Resolutions.

Dr. Carl C. Gardner, Columbia, introduced a resolution regarding insurance forms, death certificates, etc. The resolution pointed out that physicians are required to complete a large number of forms incident to hospitalization claims, sickness disability claims, etc., and especially death certificates requiring notarization of the physician's report by a Notary Public. The resolution stated that the House of Delegates of the Tennessee State Medical Association be requested to review the various reporting forms for physicians in use by the various companies doing business within the state and that contact be made with authorities of those companies whose forms are felt to be unduly cumbersome, requesting such authorities to suitably revise the forms. The resolution was referred to the Reference Committee on Resolutions.

Dr. C. M. Hamilton, Nashville, introduced a resolution regarding audiometric work. It stated that an audiologist is one who has followed a planned course of instruction leading to an M.A. or Ph.D. degree, and certain required training was necessary in these cases. The resolution resolved that the House of Delegates, acting for the State Medical Association, declare Audiology to be a profession within the meaning of the healing arts and recommend to the TSMA that the Legislative Committee of the Association seek the enactment of legislation that would include audiology in the definition of the healing arts and make provision for the licensing of this branch of the healing arts in a manner similar to physiotherapists. The resolution was referred to the Reference Committee on Resolutions.

Dr. M. F. Langston, Chattanooga, introduced a resolution requesting that the award of the general practitioner of the year be abandoned and instead "a physician of the year" be elected. The resolution further stated that every county society should be encouraged to submit a candidate for the award of physician of the year, with selection to be based on length of service or unusual contribution to medicine. This resolution was referred to the Reference Committee on Resolutions.

Dr. Thomas S. Weaver, Nashville, introduced a resolution affecting the Blue Cross Plan. The resolution stated that newborn infants with hospitalization insurance are not eligible for hospital benefits until they reach the age of two weeks. This works a hardship on many parents. The resolution resolved that members of the Nashville Pediatric Society had studied the matter and wished it to be presented to the House of Delegates of the Tennessee State Medical Association and urge the House to take appropriate action to try and correct the situation. This resolution was referred to the Reference Committee on Resolutions.

Dr. M. L. Trumbull, Memphis, introduced a resolution endorsing and encouraging the organization of a Tennessee Association of Blood Banks. The resolution set forth the minimal operating standards to be established for voluntary adoption by blood banks in Tennessee. It was pointed out that desirable objectives could be more readily obtained through the existing committee on Blood Banks of the Tennessee State Medical Association. The resolution called for the TSMA to go on record in endorsing and encouraging the formation of a separately incorporated Tennessee Association of Blood Banks and that the existing Committee on Blood Banks serve as a liaison between the TSMA and the proposed Association of Blood Banks. This resolution was referred to the Reference Committee on Resolutions.

The Speaker called for introduction of additional resolutions, and since there were none, he moved to the next order of business which was the Award to the winner of the Health Project Contest.

Health Project Contest Award

Speaker Buchanan requested Mr. Ford of the headquarters staff to make a few introductory remarks and to introduce Mrs. Hockengsmith, sponsor of the winning school class and also present her to members of the House of Delegates.

Mr. Ford introduced Mrs. J. R. Hockengsmith, a teacher at the Lee College and Academy High School on the campus of Lee College at Cleveland, Tennessee. Mrs. Hockengsmith and the class representative, Miss Frances Carden, were presented and received applause. Dr. James C. Gardner, Chairman of the Board of Trustees and Treasurer, made the presentation of the award. Dr. Gardner presented the ladies of Lee Academy with a $500 bond with the congratulations and best wishes of the Tennessee State Medical Association. The representatives of Lee Academy acknowledged with thanks.

Reports of Officers

The Speaker announced that the House would proceed with hearing the reports of the officers and asked that the reports be held to a five-minute limit if possible.

Abstracts of reports of all officers will be found on page 158 of this issue of the JOURNAL.

The report of the President, Dr. Charles C. Trabue, IV, was read to the House, pointing out the many trips made within and without the State during the past year and activities performed by the President. The report of the President was referred to the Reference Committee on Reports of Officers.

Dr. James C. Gardner, Chairman of the Board of Trustees and Treasurer, read his prepared report relating the activities of the Board of Trustees and Treasurer. The report was referred to the Reference Committee on Reports of Officers.

Dr. D. C. Seward, Nashville, Chairman of the Council, read his prepared report. It was referred to the Reference Committee on Reports of Officers.

Mr. J. E. Ballentine, Executive Secretary, rendered his report dealing with the status of the membership and other affairs of the Tennessee State Medical Association. The report was referred to the Reference Committee on Reports of Officers.

Following these reports, Dr. D. C. Seward requested that he be allowed to present a resolution in connection with his report. Permission was granted.

Resolution

The resolution pointed out that a remarkable lack of knowledge of the principles of medical ethics existed and that the majority of doctors did not have a copy of the principles of medical ethics available. It was requested that the Board of Trustees have published a small booklet of the Principles of Medical Ethics and that one be mailed to each member of the Tennessee State Medical Association. The resolution was referred to the Reference Committee on Resolutions.

Reports of Committees

Abstracts of all committee reports will be found on page 159 in this issue of the JOURNAL.

The following committee reports were submitted:

Standing Committees

Scientific Work and Editorial Board—R. H. Kampmeier, M.D., Nashville

Committee on Hospitals—Dr. E. T. Brading, Johnson City—(No report.)

Legislation and Public Policy—C. M. Hamilton, Nashville

Liaison Committee to the Public Health Department — John B. Steele, M.D., Chattangoga—(No report.)

Insurance Committee—B. F. Byrd, Sr., M.D., Nashville.

Resolution

Following this report, Dr. Byrd introduced a resolution relative to malpractice and liability insurance. The resolution stated that a number of physicians in the state had desired a liability and malpractice insurance plan sponsored by the Association and that the insurance committee had spent a great deal of time and effort in trying to obtain a company who would write such a policy for members in Tennessee. The resolution further stated that a careful study had been made of the proposal presented by the Shelby Mutual Insurance Company of Shelby, Ohio. The resolution pointed out

the benefits of the plan submitted by Shelby Mutual. It was resolved that the Liability and Malpractice Insurance Plan submitted by the Shelby Mutual Insurance Company be approved by the House of Delegates for use by the members of the Association.

The resolution was referred to the Reference Committee on Resolutions.

The Speaker announced that the House would continue with hearing committee reports.

Memoirs Committee—Henry L. Douglass, M.D., Nashville.

Symposium Postgraduate Education Committee—F. L. Roberts, M.D., Memphis.

Committee on Cancer—Ralph H. Monger, M.D., Knoxville.

Grievance Committee—Daugh W. Smith, M.D., Nashville. (The Chairman requested that deferment be made of this report for the present time, but would be reported upon later.)

Physical Therapy Committee—George W. Shelton, M.D., Chattanooga. (The report was read in the absence of the Chairman, by the Executive Secretary.)

Liaison Committee to the Department of Public Welfare—W. W. Hubbard, M.D., Nashville. (In the absence of Dr. Hubbard, the report was read by the Executive Secretary.)

The Speaker announced that this ended the reports of the standing committees and that reports of the special committees would be heard.

Special Committees

Committee on General Practice—E. L. Caudill, Jr., M.D., Elizabethtown. (Report read by Executive Secretary.)

Emergency Medical Service Committee—Frank Moore, M.D., Jackson. (Report read by the Speaker.)

Industrial Health Committee—Thomas A. Lincoln, M.D., Oak Ridge. (Report read by Mr. Ford.)

Prepaid Insurance Committee—James A. Kirtley, M.D., Nashville.

Public Service Committee—L. W. Edwards, M.D., Nashville.

Liaison Committee to United Mine Workers of America—B. M. Overholt, M.D., Knoxville.

Advisory Committee to Woman's Auxiliary—W. W. Hubbard, M.D., Nashville. (No report.)

Committee on Veterans Affairs—William J. Sheridan, M.D., Chattanooga.

Dr. Sheridan stated that he was appointed Chairman of the Committee late in the year to complete an unexpired term of the previous Chairman. Dr. Sheridan then continued with the reading of his prepared report.

Rural Health Committee — William N. Cook, M.D., Columbia.

Resolution

Following the presentation of the Rural Health Committee report, Dr. Cook requested permission to introduce a resolution. Permission granted.

The resolution pointed out that the objectives of the Tennessee 4-H Club program were to help boys and girls develop desirable health habits and attitudes and further stated that the program is in need of an adequate sponsor to improve and facilitate health education and raise the standards of health among rural people. The resolution requested the House of Delegates to make available to the 4-H Health Program a yearly sum in the amount of $702 and urged that every member of the TSMA take an active part in helping advance health education through 4-H Clubs. The resolution was referred to the Reference Committee on Resolutions.

Committee reports were continued.

Committee on Blood Banks—M. L. Trumbull, M.D., Memphis. (No report.)

Tuberculosis Committee—R. L. McCracken, M.D., Nashville. (No report.) This committee made a subsequent report which was made a part of the official records.

Mental Health Committee—Frank Luton, M.D., Nashville.

Committee on Autopsy—Leland M. Johnston, M.D., Jackson.

Health Project Contest Committee—Mrs. Oliver Graves, Jackson. (Report read by Executive Secretary.)

Labor Liaison Committee — Daugh W. Smith, M.D., Nashville.

Legal Liaison Committee to Bar Association—George K. Carpenter, M.D., Nashville.

Liability Insurance Study Committee—Carrol C. Turner, M.D., Memphis.

Headquarters Building Committee—Daugh W. Smith, M.D., Nashville.

Committee on Constitution and By-Laws—John R. Thompson, Jr., M.D., Jackson.

This report was made by the Chairman and considerable explanation was made relative to the changes made in the modernized version of the Constitution and By-Laws that were presented to each member of the House of Delegates. A step by step explanation of the changes was made by Dr. Thompson. Among others, one change included making the Public Service Committee, the Prepaid Insurance Committee and the Rural Health Committee, standing committees of the Association. Clarification was made in the By-Laws of the duties of the Board of Trustees, the President, and President-Elect. It was pointed out in the report that several sections of the old By-Laws and Constitution had been discontinued since they were no longer effective for the operation of the Tennessee State Medical Association.

Committee reports were continued.

Study Committee for Expansion of General Practice Service of the UMAW Welfare and Retirement Fund—George S. Mahon, M.D., Knoxville.

Resolution

Following the report of this Committee, the Chairman requested permission to introduce a resolution having to do with the special study committee for expansion of general practice services of the UMWA Welfare and Retirement Fund. The resolution, in principle, requested permission from the House of Delegates to approve a proposition to the UMWA to effect an expansion of the Fund Medical Services into the field of non-specialist care of non-hospitalized beneficiaries under sponsorship of the TSMA. The resolution further requested that the House of Delegates approve the recommendation of the Committee to provide (1) a program for diagnostic office studies; (2) that every member of TSMA be eligible to make application for participation, provided they would be willing to accept the minimum standards of facilities set forth by the Committee; (3) that the medical profession accept the responsibility for the supervision and auditing and control of the initial program; (4) that the House of Delegates delegate authority to this Committee to exercise medical supervision and auditing control of the program; (5) that the Committee be revised in certain instances in order to adequately discharge authority delegated to it by the Tennessee State Medical Association; (6) that the committee be instructed by the House to proceed with the program as soon as possible.

Following the report, the resolution was referred to the Reference Committee on Resolutions.

All committee reports were referred to the Reference Committee on Reports of Committees.

The following committees did not formally report. They were:

1. Committee on Hospitals
2. Liaison to the Public Health Department
3. Committee on Blood Banks
4. Liaison to the Public Health Council

Dr. R. H. Hutcheson, Franklin, requested permission of the House to introduce a resolution out of order. The Speaker asked approval of the House and it was granted.

Resolution

Dr. Hutcheson presented a resolution relative to the art and science of medical practice and the legal definition of medicine. The resolution requested that an appropriate committee be appointed to review the legal definition of medicine and medical practice, and that the committee report its recommendations to the Board of Trustees for such action as the Board of Trustees believed to be indicated including recommended new legislation. The resolution was referred to the Reference Committee on Resolutions.

The Speaker then took up the regular agenda and proceeded with the business of appointing the temporary chairmen of the three grand divisions for the election of a nominating committee. The temporary chairmen were appointed as follows:

Dr. Hiram Laws, Chattanooga—East Tennessee

Dr. James C. Gardner, Nashville—Middle Tennessee

Dr. W. C. Chaney, Memphis—West Tennessee

The delegates from each of the three respective grand divisions were requested to meet with the temporary chairmen immediately following.

The Speaker requested a report from the Committee as to organization, upon the House resuming session after dinner.

The House recessed at 6:00 p.m.

SUNDAY EVENING SESSION, APRIL 8

The House of Delegates reconvened at 7:25 p.m. for the evening session with Speaker Buchanan presiding. The Speaker called the House to order stating that a quorum was present and announced that the House would proceed with the introduction of distinguished guests and fraternal delegates. The Speaker then introduced Mrs. Roy Douglass of Huntingdon, President of the Woman's Auxiliary to the TSMA. In turn, Mrs. Douglass introduced Mrs. Elmer T. Pearson of Elizabethton, Tennessee, President-Elect of the Woman's Auxiliary who would take over as president for the year 1956-57.

Dr. Charles Trabue introduced Dr. Donald B. Koontz, President-Elect of the North Carolina State Medical Society.

The Speaker introduced Mr. V. O. Foster, Executive Secretary of the Southern Medical Association. The Speaker also introduced Mr. Jack Drury, Executive Secretary of the Nashville Academy of Medicine.

There being no unfinished reports from the afternoon session, the Speaker moved to the next order of business, which consisted of the special reports.

Special Reports

The Chairman of the AMA Delegates—Charles C. Smeltzer, M.D., Knoxville.

Woman's Auxiliary—Mrs. Roy Douglass, Huntingdon.

All special committee reports were referred to the Reference Committee on Reports of Committees.

The Speaker called upon Dr. W. C. Chaney for a report of the Nominating Committee, but it was stated that the Committee was not able to report and asked for a delay.

The next order of business was the report of the Reference Committee on the General Practitioner Award and election. This Committee asked that it be allowed additional time before reporting.

Following, the Speaker announced the personnel of the Nominating Committee which consisted of Dr. W. C. Chaney, Memphis, Chairman. Other members of the committee were Dr. Julian K. Welch, Brownsville; Dr. W. L. Phillips, Newbern; Dr. D. C. Seward, Nashville; Dr. Carl C. Gardner, Columbia; Dr. A. Fount Russell, Clarksville; Dr. Rae B. Gibson, Greenville; Dr. John Burkhart, Knoxville; Dr. John B. Steele, Chattanooga.

Election of Councilors

The Nominating Committee reported giving the suggested names for Councilors. The election of Councilors then ensued with the results as follows:

1st District—Dr. Carroll H. Long, Johnson City

3rd District—Dr. Cecil E. Newell, Jr., Chattanooga

5th District—Dr. J. Fred Terry, Cookeville

7th District—Dr. Carl C. Gardner, Columbia

9th District—Dr. W. E. Anderson, Dyersburg

There being no nominations from the floor, the Speaker cast a unanimous vote of the House for the names submitted by the Nominating Committee for election as Councilors for their respective districts.

Additional Amendments and Resolutions

The next item on the agenda called for the introduction of additional amendments and resolutions. Dr. Julian K. Welch, Brownsville, introduced a resolution stating that hospitals are being operated by osteopathic physicians and further that the hospitals are not controlled by the official accreditation agencies and such hospitals lack recognized accreditation. It was stated that the Consolidated Medical Assembly of West Tennessee requested their delegates to bring to the attention of the House of Delegates of TSMA and protest the action of the two official Blue Cross Agencies of Tennessee and other private companies which have recognized and are underwriting patients in osteopathic hospitals. The House of Delegates was asked to go on record as being opposed to payment of benefits in osteopathic hospitals and that such insurance companies that now or that might in the future recognize these hospitals be

requested to discontinue such recognition.

This resolution was referred to the Reference Committee on Resolutions.

The Speaker called for any other old business to be presented and there being none, he called for other new business that any delegate wished to present. There being none, the House proceeded to the next order of business.

Dr. John R. Thompson was recognized as a member of the General Practitioner Award Committee to make a report for that committee. Since only two candidates had been submitted, the Committee reported that Dr. J. W. Oursler of Humboldt and Dr. May Wharton of Pleasant Hill were the nominees for the Outstanding GP Award. The Speaker stated that the committee which had been kept secret until this time was composed of the three immediate past-presidents of the Association and he expressed appreciation to the committee for its work.

Dr. R. H. Hutcheson, Franklin, spoke in favor of the candidacy of Dr. May Wharton. His remarks eulogized Dr. Wharton for the contribution that she had made to medicine in this state.

Dr. G. H. Berryhill, Jackson, spoke in behalf of Dr. Oursler. Those speaking in favor of the candidates were limited to three minutes by the Speaker.

Following the brief nominating speeches, the Speaker asked the members of the House to prepare their ballots and during the counting of the ballots several announcements were made.

Upon completing the count of the ballots by the tellers, the Speaker announced that Dr. May Wharton of Pleasant Hill had been elected the Outstanding General Practitioner for the year 1956. The Speaker requested that this announcement be kept secret until Dr. Wharton could be advised in order that there would be no advance publicity, and that the election would be as a surprise.

It was announced that anyone wishing to appear before the various Reference Committees would have the opportunity to be heard.

There being no other business, the House was recessed at 8:35 p.m. until Tuesday morning at 9:00 a.m., April 10, 1956.

TUESDAY MORNING SESSION, APRIL 10

The House of Delegates reconvened at 9:15 a.m. in the Cadet Room of the Hotel Peabody with Vice-Speaker Joseph W. Johnson, Jr., presiding.

Dr. Julian K. Welch, acting for the Chairman of the Credentials Committee, reported a quorum present.

The first order of business was the introduction of guests and Mrs. Ben L. Pentecost, Memphis, Chairman of the Committee on Arrangements of the Auxiliary of TSMA was asked to introduce her guest. Mrs. Pentecost introduced Mrs. Mason Lawson of Little Rock, Arkansas, President of the Woman's Auxiliary to the American Medical Association. Mrs. Lawson made brief remarks.

Speaker Johnson introduced Mrs. Oliver Graves, Chairman of the Health Project Contest, who did not have an opportunity to appear before the House on Sunday and she was asked to make her remarks at this time. Mrs. Graves replied by giving a report of the Auxiliary's important work relative to the Health Project Contest.

The Speaker continued with the next order of business and requested a report from the Executive Secretary relative to the issuance or suspension of any county society charters. It was reported that no society charters had been issued or suspended.

Dr. W. C. Chaney requested permission from the House to correct an error in the Nominating Committee's report regarding a councilor for the Fifth District.

Permission was granted by the House.

Dr. Chaney pointed out that the Committee had selected a councilor from the Fifth District who lived in the Fourth District and the nominating committee wished to withdraw the name of Dr. Fred Terry as Councilor for the Fifth District and nominate Dr. Henry T. Kirby-Smith of Sewanee.

The House acepted the withdrawal of Dr. Terry's name and the nomination of Dr. Kirby-Smith. The motion was severally seconded. The motion was made that nominations be closed and Dr. Henry T. Kirby-Smith was elected as Councilor for the Fifth District.

Introduction of Additional Amendments and Resolutions

There being no amendments to be intro-

duced, the Speaker requested introduction of additional resolutions.

Dr. G. H. Berryhill, Jackson, introduced a resolution regarding legislation detrimental to the Ophthalmologists and the field of medicine. The resolution stated that the national aims of the American Optometric Association is to obtain changes in individual state optometric laws and that attempts had already been made in other states to interpret the optometry law to mean that ophthalmologists when doing refractions are practicing optometry unlawfully. The resolution requested the House of Delegates to instruct its Legislative Committee to scrutinize carefully every optometric or other bill offered to the 1957 session of the State Legislature which might be detrimental to the ophthalmologist or any field of medicine and that the entire membership of the Tennessee State Medical Association be alerted to resist vigorously any encroachment on the field of medicine by optometrists or any other non-medical body. This resolution was referred to the Reference Committee on Resolutions.

Dr. Berryhill presented another resolution which had to do with participation of members of TSMA in political affairs of the State. The resolution pointed out that many bills of interest to the Association were presented in the Legislature each year. The resolution resolved that members of the TSMA be encouraged to offer themselves as candidates to the House of Representatives and Senate of the State Legislature and that all members of the TSMA be requested to be active in the election of various members of the Legislature so that they might use their influence in preventing legislation in opposition to the public welfare. The Resolution was referred to the Reference Committee on Resolutions.

Dr. Carl Gardner, Columbia, introduced a resolution with regard to inspection of hospitals, nursing homes, etc. The resolution stated that approximately 200 hospitals and 200 nursing homes and homes for the aged were in Tennessee and that the Hospital Licensing Authority for the State did not employ sufficient personnel to inspect these installations. Therefore be it resolved that the House of Delegates of TSMA direct its Legislative Committee to bring this matter forcefully to the attention of the State Administration requesting an adequate appropriation for the Hospital Licensing Authority so that the hospitals, nursing homes and similar institutions in the state may be properly inspected.

The Resolution was referred to the Reference Committee on Resolutions.

The Speaker stated that a total of seventeen resolutions had been presented to the House. There being no further resolutions to be presented, the Speaker moved to the next order of business which was the report of the Reference Committee on Amendments.

Report of Reference Committee on Amendments

Dr. John R. Thompson, Jr., Chairman

The Speaker then called for the report of the Reference Committee on Amendments and the following report was submitted.

Dr. Thompson stated that the Reference Committee had met and consulted with many members of the House of Delegates and he wished to make an amendment to Article V of the proposed version of the Constitution which will have to lay over until the 1957 session. Article V would read: "The House of Delegates shall be the legislative and business body of the Association and shall consist of:

"(1) delegates elected by the component societies.

"(2) ex-officio, the officers.

"(3) the five most recent surviving ex-presidents of the Association except, that all ex-presidents who are living in April, 1956, shall be members for life.

"(4) the Association's delegates to the A.M.A., the Commissioner of Public Health and the Commissioner of Mental Health for the state of Tennessee, provided that such Commissioner of Public Health or Mental Health is a member in good standing of the T.S.M.A."

With that Amendment and that being the only question raised with regard to the Constitution, the Reference Committee moved that this revised version of the Constitution be laid on the table to be voted upon on the first day of next year's session.

The Reference Committee recommended that the By-Laws were acceptable as written in the revised version and it was moved

that this be presented to the House for approval at this time.

Speaker Johnson pointed out that the Constitution must lay on the table for one year, but that the recommendation of Dr. Thompson meant that the House would be voting on the modernized By-Laws at this time. The motion was made by Dr. Thompson to adopt the By-Laws as revised, and seconded by Dr. Chaney.

Upon motion duly made, seconded and carried, **the amendment was adopted and the By-Laws were approved and placed into effect.**

It was moved that the report of the Reference Committee on Amendments be adopted as a whole. Upon motion duly made, seconded and approved, **the report of the Reference Committee on Amendments was approved as a whole.**

Report of Reference Committee on Resolutions

The Speaker next called for the report of the Reference Committee on Resolutions, stating that the Committee had had a tremendous job to perform. The Speaker asked the Chairman, Dr. Charles Sienknecht of Knoxville, to make his committee's report. Dr. Sienknecht stated that he would present the resolution in condensed form. Following is the complete report for the record and the recommendation of the Reference Committee.

Resolution on A.M.A. Membership

No. 1

By Chas. C. Trabue, IV, M.D., Nashville

"WHEREAS, the membership of the Tennessee State Medical Association has increased more than 10 per cent in the past two years, and

"WHEREAS, membership from Tennessee in the American Medical Association has decreased to where AMA membership is now below 2,000 members from this state, and

"WHEREAS, membership must be maintained in excess of 2,000 members in order for Tennessee to have our present three delegates in the House of the AMA, this being to the advantage of the TSMA.

"NOW THEREFORE BE IT RESOLVED, that this House of Delegates go on record as urging every member of the Tennessee State Medical Association to also be a member of the American Medical Association, and that the Secretary of each component county medical society be sent a copy of this Resolution."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the Resolution was duly adopted.**

Resolution on County Society Officers Conference

No. 2

By Chas. C. Trabue, IV, M.D., Nashville

"WHEREAS, there is a constantly increasing need for a closer liaison between County, State and National levels of organized medicine, and

"WHEREAS, the principal officers of county medical societies are the responsible link with the State and National organizations, and

"WHEREAS, many other State Medical Associations have found it advantageous to conduct an annual statewide conference for officers of county medical societies,

"NOW THEREFORE BE IT RESOLVED, that this House of Delegates recommend to the Board of Trustes to investigate and if found feasible to take the necessary steps to set up proper committees and other machinery to conduct a statewide county medical society officers conference, to be held at a place and time that will best accomplish its intended purposes."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and the **Resolution was adopted.**

Resolution on Malpractice and Liability Insurance Plan

No. 3

By Dr. B. F. Byrd, Nashville

"WHEREAS, many members of the Tennessee State Medical Association have expressed an interest in a malpractice and liability insurance plan sponsored by the TSMA, and

"WHEREAS, the Insurance Committee of TSMA has been studying this request for more than a year, and

"WHEREAS, the great majority of insur-

ance companies now writing liability and malpractice insurance are not now expanding this type of insurance, and are not interested in writing additional malpractice policies, and

"WHEREAS, the Insurance Committee of the TSMA has carefully studied the proposal made by the Shelby Mutual Insurance Company, and

"WHEREAS, if all interested members of the State Medical Association participate in a plan of this kind, it would greatly reduce the spread of risks which directly affects the premium on such insurance, and

"WHEREAS, the plan offered by the Shelby Mutual Insurance Company is the only one submitted that offers any kind of reduction in premium against the manual or bureau rates now in effect,

"NOW THEREFORE BE IT RESOLVED, that the Liability and Malpractice Insurance plan submitted by the Shelby Mutual Insurance Company, and as outlined in the Insurance Committee report, be approved by this House of Delegates for use by members of Tennessee State Medical Association."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote, carried and **the resolution was adopted.**

Resolution on Expansion of General Practice Services to the UMWA Welfare and Retirement Fund

No. 4

By Dr. George S. Mahon, Knoxville

"WHEREAS, a committee to be called A Study Committee for Expansion of General Practice Services of the UMWA Welfare and Retirement Fund has been appointed by the President of TSMA, and

"WHEREAS, the above committee has made such a study and has delivered the report to the House of Delegates of TSMA,

"NOW THEREFORE BE IT RESOLVED:

1. That the House of Delegates of the TSMA approve a proposition to the UMWA Welfare Fund to effect an expansion of the Fund Medical Services into the field of non-specialist care of non-hospitalized beneficiairies under sponsorship of the TSMA.
2. That the House of Delegates approve the recommendations of the above committee to provide:
   a. An initial program for diagnostic office studies and other limited procedures as may be evolved in agreement with the UMWA Welfare Fund.
   b. That every member of the Tennessee State Medical Association shall be eligible to make application for participation with the understanding that acceptance will be contingent upon meeting minimum standards of facilities as set forth by the above committee, and that operation of the extension program will be under the direct guidance of the Tennessee State Medical Association.
3. That organized medicine, represented in Tennessee by the TSMA, accept the responsibility for the medical supervision and auditing and control of the initial program and any future expansion of the program.
4. That the House of Delegates delegate authority to the above committee to exercise aforesaid medical supervision and medical auditing control of the program, in a manner agreeable to the TSMA and the Fund.
5. That the above committee be revised as follows in order to discharge authority delegated to it by TSMA:
   a. The above committee be made a Permanent Special Committee and that its scope and name be hereby broadened to include not only study but administration of the extension program.
   b. Appointments to the above committee be made by the President of the Tennessee State Medical Association at his discretion, but the committee as a committee not be discontinued except by the Board of Trustees.
   c. The committee be given the authority, through its Chairman, to appoint any sub-committees it may feel it needs from the membership of the Tennessee State

Medical Association to assist in the administration of the program.

6. That the Revised Committee be instructed by the House of Delegates to proceed with:
   a. The proposal of the UMWA Welfare Fund for the initial limited program and to work out details with the Fund and to get the program started as soon as possible.
   b. The plan for medical audit and control and prepare it to go into effect, with the necessary subcommittees, as soon as the medical program can be readied for operation."

Following, the Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the Resolution was adopted.**

Resolution on Hospitalization Benefits for Newborn Infants

No. 5

By Dr. Thomas S. Weaver, Nashville

"WHEREAS, newborn infants with hospitalization insurance under the Tennessee Hospital Service Association, better known as the Blue Cross Plan, are not eligible for hospital benefits until they reach the age of two weeks, and

"WHEREAS, this unjustly works a hardship on many young parents whose newborn infants have conditions requiring hospitalization in the first two weeks of life,

"NOW THEREFORE BE IT RESOLVED, by the members of the Nashville Pediatric Society that this matter be presented to the House of Delegates of the Tennessee State Medical Association and urge the House to take appropriate action to try and correct this situation."

The Reference Committee stated that it had studied this Resolution in great detail and set forth four reasons why the Reference Committee believed that this resolution should not be adopted.

Therefore, the Reference Committee recommended that this resolution not be adopted. The question was called for, the motion was put to a vote, carried and **the resolution was not adopted.**

Resolution to Select "A Physician of the Year"

No. 6

By Dr. M. F. Langston, Chattanooga

"WHEREAS, the existing policy of electing a General Practitioner of the Year has not created the interest of all the profession, and

"WHEREAS, it would prove more effective to have the TSMA elect a 'Physician of the Year.'

"NOW THEREFORE BE IT RESOLVED, that every Component Society be encouraged to submit a candidate for the award of 'Physician of the Year.' This selection to be based on either length of service or unusual contribution to medicine."

The Reference Committee recommended that in keeping with the national award made by the AMA that the Association should continue with the recognition of the Outstanding General Practitioner of the Year. If a Physician of the Year were presented an award, the Reference Committee recommended that it be done in addition to the award to the outstanding general practitioner. Therefore the Committee recommended that the Resolution not be adopted.

The question was called for, the motion was put to a vote and the **resolution was not adopted.**

Resolution to Establish a Memorial Trust Fund

No. 7

By Dr. Daugh W. Smith, Nashville

"WHEREAS, it is true that when doctors die their friends frequently wish to express sympathy to the family by making a contribution to a permanent charity in which the deceased had shown an interest, and

"WHEREAS, the families of those deceased show a growing preference that the public manifest their sympathy in this way, and

"WHEREAS, there is no constituted body qualified to accept and administer contributions given under these circumstances and for this purpose,

"NOW THEREFORE BE IT RESOLVED, that the Tennessee State Medical Associa-

tion endorse such contributions as both worthy of purpose and gratifying to the bereaved, and that the Tennessee State Medical Association qualify to accept and administer such funds as a Memorial Trust, and that all gifts received be preserved and invested so as to form the corpus of a permanent trust, and that the income from the trust be given each year to a medical charity within the State of Tennessee."

There was considerable discussion on this motion from the floor and Dr. A. M. Patterson, Chattanooga, stated that the Association was not legally qualified to accept such funds. Dr. Patterson moved that the passage of this Resolution be tabled. Upon taking a vote, the motion to table **was not carried** and the matter was reopened for discussion.

The question was further discussed by Dr. R. H. Hutcheson and Dr. D. W. Smith.

Dr. William A. Garrott, Cleveland, moved that the Resolution be amended to read that the "Tennessee State Medical Association establish a qualified agency to receive such contributions and donations." The Amendment was seconded and the amendment to the Resolution was carried by voice vote.

The Resolution as amended was referred back to the Reference Committee on Resolutions.

Resolution on Insurance Forms, Death Certificates, Etc.

No. 8

By Dr. Carl C. Gardner, Jr., Columbia

"WHEREAS, physicians today are required to complete a large number of forms incident to hospitalization claims, sickness disability claims, accident claims, death certificates, etc., and

"WHEREAS, the number of such claims is continually increasing and justifiably so, due to the increasing numbers of the population who are obtaining coverage by such benefits, and

"WHEREAS, the majority of insurance companies handling such policies have prepared claim forms which are relatively brief, concise, and with pertinent questions only, thus requiring a minimum only of the physician's time, and

"WHEREAS, a certain number of insurance companies handling such claims have a variety of questions having no particular bearing on the matter at hand, and

"WHEREAS, specifically, certain reports, especially death certificates, even require notarization of the physician's report by a Notary Public, which requirement should be considered an afront to the integrity of the medical profession, and

"WHEREAS, these forms must be completed as required in order that the physician may serve the best interests of the patient,

"NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the Tennessee State Medical Association in its annual convention assembled request the Committee on Insurance to review the various reporting forms for physicians in use by the various insurance companies doing business within the state, and that it contact authorities of those companies whose forms are felt to be unduly cumbersome, requesting such authorities to suitably revise such forms, and

"BE IT FURTHER RESOLVED, specifically, that the House of Delegates of the Tennessee State Medical Association in convention assembled strongly condemns the requirement on any report or claim form that the physician's signature be notarized and that a copy of these resolutions be forwarded to the proper authorities of all companies doing business within the state who have this requirement on their forms."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution on Audiometric Work and Audiology

No. 9

By Dr. C. M. Hamilton

and Dr. W. W. Wilkerson, Nashville

"WHEREAS, audiometric work is a time consuming and tedious procedure which ordinarily is delegated by a physician to a person trained in the science of audiology, and

"WHEREAS, an audiologist is one who has followed a planned course of instructions leading to an M.A. or Ph.D. Degree in the science of the sense of hearing, and

"WHEREAS, the American Speech and

Hearing Association has established minimum basic requirements for certification in this science, and

"WHEREAS, doctors of medicine interested in this field of medicine and research need to avail themselves of assistants with training in this science in order to ascertain the functional capacity of an ear and arrive at a diagnosis as to the cause of hearing loss, and

"WHEREAS, persons trained in audiology are skilled in the use of electronic and other equipment necesary to teach persons with hearing loss and advise with the physician with regard to the best means to use in treating the patient so that he may have use of his remaining hearing function, and

"WHEREAS, audiology is a profession,

"NOW THEREFORE BE IT RESOLVED, that this House of Delegates, acting for the State Medical Association, declare audiology to be a profession within the meaning of the healing arts and recommend to the State Medical Association that the Legislative Committee of the Association, by such means as are proper, seek the enactment of legislation that will include audiology in the definition of the healing arts and make provision for the licensing for this branch of the healing arts in a manner similar to that of the physiotherapists."

In view of a subsequently introduced resolution for further study of the definition of medicine and medical practice, the Reference Committee moved that this resolution not be adopted.

The question was called for, the motion was put to a vote and carried and **the resolution was not adopted.**

Resolution Endorsing and Encouraging the Organization of a Tennessee Association of Blood Banks

No. 10

By Dr. W. W. Tribby
and Dr. M. L. Trumbull, Memphis

"WHEREAS, there is no uniformity of techniques employed by the blood banks in Tennessee, and

"WHEREAS, it is highly desirable that minimal operating standards be established for voluntary adoption by blood banks in Tennessee, and

"WHEREAS, operation under minimum standards will facilitate the exchange of blood between banks in Tennessee and other states through proposed clearing house plans, thereby making blood more readily available for patients, and

"WHEREAS, the pooling of blood bank facilities through organization will mobilize more adequate quantities of blood at less expense for civil defense and the armed forces in the event of a national emergency, and

"WHEREAS, it is believed that through organizing the blood banks in Tennessee, these desirable objectives can be more readily attained than through the existing Committee on Blood Banks of the Tennessee State Medical Association,

"NOW THEREFORE BE IT RESOLVED, that the Tennessee State Medical Association go on record endorsing and encouraging the formation of a separately incorporated Tennessee Association of Blood Banks, and that the existing Committee on Blood Banks serve as a liaison between the Tennessee State Medical Association and the proposed Tennessee Association of Blood Banks."

The Reference Committee on Resolutions recommended the adoption of this Resolution.

Upon discussion, Dr. Adams stated that the Section on Pathology had voted to table the resolution, further stating that the resolution had a lot of implications involving blood banks operated by non-medical personnel. Dr. Adams moved that the resolution be tabled. The motion was duly seconded and the motion was put to a vote and carried. The motion to table carried preference, therefore **the resolution was tabled.**

Resolution Regarding Principles of Medical Ethics

No. 11

By Dr. D. C. Seward, Nashville

"WHEREAS, there seems to be a remarkable lack of knowledge of the principles of ethics, and

"WHEREAS, we do not have in the Tennessee State Medical Association a handbook of 'Principles of Medical Ethics', and

"WHEREAS, according to our Constitution we have adopted the Code of Ethics of the American Medical Association, and

"WHEREAS, the 'Principles of Medical Ethics' is published in the American Medical Association 'Guide to Services',

"NOW THEREFORE BE IT RESOLVED, that we request the Board of Trustees to have published in a small booklet form the 'Principles of Medical Ethics' and that one be mailed to each member of the Tennessee State Medical Association."

The Reference Committee stated that the existing Code of Ethics would be revised at the June Meeting of the House of Delegates of the AMA and therefore recommended that the Resolution be postponed until a new Code of Ethics was available.

The Reference Committee recommended that the Resolution not be adopted. The question was called for, the motion was put to a vote and carried and **the resolution was not adopted.**

Resolution For 4-H Club Health Program Sponsorship

No. 12

By W. N. Cook, M.D., Columbia

"WHEREAS, the objectives of the Tennesee 4-H Club Health Program are to help 4-H boys and girls develop desirable health habits and attitudes, share in the responsibility for improving the health of the family and of the community, and appreciate the importance of good health in relation to other human values, and

"WHEREAS, the enrollment in the 4-H Health Program in Tennessee last year was 29,157 of the 133,000 4-H members, and

"WHEREAS, this program is in need of adequate sponsorship to the end that it may improve and facilitate health education,

"NOW THEREFORE BE IT RESOLVED, that this House of Delegates make available to the 4-H Health Program a yearly sum in the amount of $702.00 and go on record as urging every member of the Tennessee State Medical Association to take an active part in helping advance health education through our 4-H clubs, and that the Secretary of each component county medical society be sent a copy of this Resolution."

The Reference Committee approved the Resolution, but felt that the amount of money allocated should be studied by the Board of Trustees. The Committee moved the adoption of the Resolution with the stipulation that this be considered by the Board of Trustees in regard to the worthiness and amount of any donation to the cause.

The Reference Committee recommended the adoption of the Resolution, with the stipulation that the amount of money would be left to the discretion of the Board of Trustees. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution to Appoint a Committee to Review Legal Definition of Medicine and Medical Practice

No. 13

By Dr. R. H. Hutcheson, Franklin

"WHEREAS, the art and science of medical practice is a dynamic rather than a static profession, and

"WHEREAS, the practice of medicine is a profession defined by law in the State of Tennessee, and

"WHEREAS, this legal definition is from time to time subject to interpretation by the courts, and

"WHEREAS, this definition has not been officially studied by the Association for many years,

"NOW THEREFORE BE IT RESOLVED, that an appropriate committee be appointed to review the legal definition of medicine and medical practice, and

"BE IT FURTHER RESOLVED, that this committee report its recommendations to the Board of Trustees for such actions as the Board of Trustees believes to be indicated including recommended new legislation."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution That the TSMA Go on Record as Opposed to Payment of Insurance Benefits in Osteopathic Hospitals

No. 14

By Dr. Julian K. Welch, Brownsville

"WHEREAS, certain so-called hospitals are being operated in Tennessee by osteopathic physicians, and

"WHEREAS, these hospitals are not con-

trolled by the official accreditation agencies, and

"WHEREAS, the welfare of the patients cannot be adequately guarded because of lack of recognized accreditation,

"'WHEREAS, the Consolidated Medical Assembly of West Tennessee in official meeting requested their delegates to bring to the attention of the House of Delegates of the Tennessee State Medical Association and protest the action of the two official Blue Cross Agencies of Tennessee and other private companies which have recognized and are underwriting patients in these hospitals.

"THEREFORE BE IT RESOLVED, that the House of Delegates of the Tennessee State Medical Association in annual session in Memphis go on record as being opposed to payment of benefits in osteopathic hospitals in the state of Tennessee and that such insurance agencies that now or that might in the future recognize these hospitals be requested to discontinue such recognition."

The Reference Committee stated that it had investigated the Resolution carefully. It was noted that Osteopaths are licensed by the State of Tennessee and the Healing Arts and legally therefore have the same right to operate hospitals as do medical doctors. The Reference Committee stated that it believed that the Association could not win this argument legally and that the TSMA would be the losers in a publicity battle.

The Reference Committee recommended that the Resolution not be adopted. The question was called for, the motion was put to a vote and duly carried and **the resolution was not adopted.**

At this point, Dr. D. C. Seward, Nashville, asked permission of the House to amend his previous Resolution regarding Medical Ethics by adding an amendment. It was determined by the Speaker that this matter should be handled with a new Resolution which was introduced at this time and became Resolution Number 18.

Resolution Regarding Legislation Detrimental to the Ophthalmologists and the Field of Medicine

No. 15

By Dr. G. H. Berryhill, Jackson

"WHEREAS, the national aims of the American Optometric Association through its various state subsidiary associations is to obtain changes in individual state optometric laws by legislative fiat which will permit optometrists to practice ophthalmic medicine and surgery, and

"WHEREAS, attempts have already been made in other states to interpret the Optometry Law to mean that ophthalmologists when doing refractions are practicing optometry unlawfully, thereby for the first time in the history of this country attempting to restrict Doctors of Medicine from practicing their profession.

"THEREFORE BE IT RESOLVED, that the Tennessee Academy of Ophthalmology and Otolaryngology request the House of Delegates of TSMA to instruct its Legislative Committee to scrutinize carefully every optometric or other bills offered to the 1957 or any other sessions of the Tennessee State Legislature which might be detrimental to the Ophthalmologists or any field of medicine, and that the entire membership of the Tennessee State Medical Association be alerted to resist vigorously any encroachment on the field of medicine by optometrists or any other non-medical body or organization or any attempt to restrict Doctors of Medicine in the field of refraction or any facet of the diagnosis and treatment of ocular or any other medical disease or condition."

The House proceeded with the conduct of other business at this point and returned at a later time for continuation of the Report of the Reference Committee on Resolutions. For the record, the Reference Committee on Resolutions will be continued, herewith.

The Reference Committee recommended that Resolution Number 7, to establish a memorial trust fund, should be adopted as amended by Dr. William A. Garrott.

The question was called for, the motion was put to a vote and carried and **the resolution was adopted as amended.**

The Reference Committee continued with Resolution Number 15 on legislation detrimental to the Ophthalmologists and the field of medicine.

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution on Participation of Members of TSMA in Political Affairs of the State

No. 16

By Dr. G. H. Berryhill, Jackson

"WHEREAS, many bills are offered in the Tennessee State Legislature which are detrimental to the best interests of the Tennessee State Medical Association, and

"WHEREAS, most legislation is controlled by individuals or groups through their influence with the members of the legislature,

"THEREFORE BE IT RESOLVED, that the individual members of the Tennessee State Medical Association be encouraged to offer themselves as candidates to the House of Representatives and Senate of the Tennessee State Legislature,

"AND BE IT FURTHER RESOLVED, that all members of TSMA be requested to be active in election of the various members of the State Legislature, so that they may use their influence in preventing legislation inimicable to the public welfare."

The Reference Committee recommended the adoption of this resolution. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution on Inspection of Hospitals, Nursing Homes, Etc.

No. 17

By Dr. Carl C. Gardner, Columbia

"WHEREAS, there are in the State of Tennessee approximately 200 hospitals, 200 nursing homes, and 25 homes for the aged, and

"WHEREAS, the Hospital Licensing Authority of the State employs, at the present time, only one person to inspect all of these institutions, which task is obviously impossible for one person to perform, and

"WHEREAS, the reason for this inadequacy of inspecting personnel is lack of appropriation of sufficient funds to employ more personnel, and

"WHEREAS, the standard of care in many of these institutions, and especially in a number of the nursing homes, is substandard,

"NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the Tennessee State Medical Association direct its Legislative Committee to bring this matter forcefully to the attention of the State Administration and Legislature, requesting an adequate appropriation for the Hospital Licensing Authority so that the hospitals, nursing homes, and similar institutions in the State may be properly inspected."

The Reference Committee recommended the adoption of this Resolution. The question was called for, the motion was put to a vote and carried and **the resolution was adopted.**

Resolution on Principles of Medical Ethics

No. 18

By Dr. D. C. Seward, Nashville

"WHEREAS, there seems to be a remarkable lack of knowledge of the priniciples of ethics; and

"WHEREAS, we do not have in the Tennessee State Medical Association a handbook of 'Principles of Medical Ethics'; and

"WHEREAS, according to our Constitution we have adopted the Code of Ethics of the American Medical Association; and

"WHEREAS, the 'Principles of Medical Ethics' is published in the American Medican Association 'Guide to Services';

"NOW THEREFORE BE IT RESOLVED, that we request the Board of Trustees to have published in a small booklet form the 'Principles of Medical Ethics' as soon as the revised Code of Ethics is available from the American Medical Association and that one be mailed to each member of the Tennessee State Medical Association."

The Reference Committee recommended the adoption of this Resolution. The question was called for and the motion was put to a vote and carried and **the resolution was adopted.**

At the completion of the Reference Committee on Resolutions report, a motion was made, duly seconded and carried that **the report of the Reference Committee on Resolutions be accepted as a whole.**

Dr. Chas. C. Trabue, IV, Nashville, moved that the Reference Committee on Resolutions be commended for its fine job with regard to the handling of these resolutions. **The motion was severally seconded and carried.**

The Speaker then announced that the House would continue by hearing the report

of the Reference Committee on Reports of Officers.

Report of the Reference Committee on Reports of Officers

By J. Malcolm Aste, M.D., Chairman, Memphis

The Speaker then called for the report of the Reference Committee on Reports of Officers and Dr. Aste tendered the following report:

Report of the President

The Reference Committee on Reports of Officers had reviewed the report of Dr. Chas. C. Trabue, IV, President, and commended him highly for the manner in which he had carried out the duties of his office for the past year. The Reference Committee agreed that the appropriation for the President's expense relative to State Association business should be continued. The Reference Committee moved acceptance of the report.

The motion to adopt the report of President Trabue was put to a vote and **unanimously carried.**

Report of the Chairman of the Board of Trustees and Treasurer

The Reference Committee reviewed the report of Dr. James C. Gardner, Chairman of the Board of Trustees and Treasurer. The Committee expressed gratitude to the members of the Board of Trustees who were doing such a splendid job in conducting the affairs of the Association.

Upon motion duly made and seconded, **the report of the Chairman of the Board of Trustees and Treasurer was unanimously adopted.**

Report of Secretary-Editor

The Reference Committee reviewed the report of Dr. R. H. Kampmeier, Secretary-Editor, and expressed appreciation to him for the splendid work in producing a very fine Journal. Expression of thanks was also extended to the Editorial Board, Dr. Addison B. Scoville, Jr., and Dr. Albert Weinstein, both of Nashville.

Upon motion duly made and seconded, **the report of the Secretary-Editor was unanimously adopted.**

Report of the Council

The Reference Committee reviewed the report of Dr. D. C. Seward, Chairman of the Council, and commended him and his councilor members for outstanding work during the past year.

Upon motion duly made and seconded, **the report of the Council was unanimously adopted.**

Report of Executive Secretary

The Reference Committee reviewed the report of Mr. J. E. Ballentine, Executive Secretary, and expressed pride and appreciation for his activities in behalf of the Association during the past year.

Upon motion duly made and seconded, **the report of the Executive Secretary was unanimously adopted.**

The Chairman moved that the report of the Reference Committee on Reports of Officers be adopted as a whole. Upon motion duly made and seconded, **the report of the Reference Committee on Reports of Officers was adopted as a whole.**

Report of Reference Committee on Reports of Committees

By B. M. Overholt, M.D., Knoxville

Committee on Scientific Work and Editorial Board—We recommend acceptance of this report.

Legislative and Public Policy—We recommend acceptance of this report.

At this point, it was moved that the report of all committee reports be recommended as a whole.

The Chairman of the Reference Committee stated that all committee reports had been reviewed and the reports of the following committees had been accepted:

Memoirs Committee
Symposium Committee on Postgraduate Education
Cancer Committee
Grievance Committee
Physical Therapy Committee
Liaison to Department of Public Welfare
General Practice
Emergency Medical Service
Industrial Health
Prepaid Insurance
Public Service Committee
Liaison to United Mine Workers of America
Committee on Veterans Affairs
Rural Health Committee
Tuberculosis Committee

Committee on Blood Banks
Labor Liaison Committee
Legal Liaison to Bar Association
Liaison to Public Health Council
Liaison to Tennessee State Dental Association
Liability Insurance Study Committee
TSMA Headquarters Building Committee
Committee on Constitution and By-Laws

Special Reports

President, Woman's Auxiliary
Report of the House of Delegates Chairman to AMA

Dr. Overholt then moved the adoption of the report of the Reference Committee on Reports of the Committees as a whole. The motion was duly made, seconded and passed and **the report of the Reference Committee on Reports of Committees was unanimously adopted as a whole.**

At this point, and upon request from members of the House, the Speaker announced that any persons in the room who were not members of the Tennessee State Medical Association, would please excuse themselves.

Report of the Nominating Committee on Election of Officers

The Speaker then called for the report of the Nominating Committee and stated that the House would proceed with the election of officers. Dr. William C. Chaney, Memphis, Chairman of the Nominating Committee, submitted the following report

Report of the Nominating Committee for Officers

WM. C. CHANEY, M.D., Chairman, Memphis

Mr. Speaker and members of the House: Your Nominating Committee would like to place the names of Dr. J. Paul Baird of Dyersburg, Dr. James R. Lewis of Ripley, and Dr. Malcolm T. Tipton of Union City in nomination for the office of President-Elect.

Upon motion duly made and seconded the nominations were declared closed and the House ensued with the balloting and collection and counting of ballots. During the counting of the ballots, the nominations continued.

The Nominating Committee placed the name of Dr. R. N. Buchanan, Jr., of Nashville for the office of Speaker of the House. There being no further nominations, Dr. Buchanan was unanimously elected.

The Nominating Committee placed the name of Dr. Joseph W. Johnson, Jr., of Chattanooga for the office of Vice-Speaker of the House. There being no further nominations, Dr. Johnson was declared unanimously elected Vice-Speaker of the House of Delegates.

The Nominating Committee presented the name of Dr. R. H. Kampmeier of Nashville as Secretary-Editor. There being no further nominations, Dr. Kampmeier was declared elected Secretary-Editor.

The Nominating Committee placed the name of Dr. H. L. Monroe of Erwin for Trustee from East Tennessee. There being no other nominations, Dr. Monroe was declared unanimously elected as a Trustee from East Tennessee.

The Nominating Committee named Dr. John Thornton, Jr., of Brownsville for the office of Vice-President from West Tennessee. There being no other nominations, Dr. Thornton was declared unanimously elected Vice-President from West Tennessee.

The Nominating Committee selected Dr. Kenneth L. Haile of Cookeville for the office of Vice-President from Middle Tennessee. There being no other nominations Dr. Haile was unanimously elected Vice-President from Middle Tennessee.

The Nominating Committee selected Dr. Rae B. Gibson of Greeneville for the office of Vice-President from East Tennessee. There being no further nominations Dr. Gibson was declared unanimously elected Vice-President from East Tennessee.

The Nominating Committee presented the name of Dr. Charles C. Smeltzer of Knoxville as Delegate to the American Medical Association. There being no further nominations, Dr. Smeltzer was unanimously elected Delegate to AMA.

The Nominating Committee selected Dr. William J. Sheridan of Chattanooga as alternate delegate to the American Medical Association. There being no other nominations, Dr. Sheridan was unanimously elected as alternate delegate to AMA.

The Nominating Committee presented the names of the following six physicians, two of whom will be subsequently appointed by

the Governor, for the Public Health Council. They are: Dr. John W. Adams, Jr., Chattanooga; Dr. Julian C. Lentz, Jr., Maryville; Dr. Oliver W. Hill, Jr., Knoxville; Dr. John R. Thompson, Jr., Jackson; Dr. Julian K. Welch, Brownsville; and Dr. S. Fred Strain, Memphis.

The Speaker called for additional nominations from the floor. There being none, the above six physicians were declared unanimously nominated for possible appointment by the Governor to the Public Health Council.

The Nominating Committee selected three physicians for the Board of Trustees of the State Tuberculosis Hospital from East Tennessee, one of whom will be appointed subsequently by the Governor. They are: Dr. Manly F. Langston, Chattanooga; Dr. Henry T. Kirby-Smith, Sewanee; Dr. Roy W. Epperson, Athens.

There being no further nominations, the above three named physicians were elected, one of whom will be appointed by the Governor to the Board of Trustees of the State Tuberculosis Hospitals.

Following the report of the Nominating Committee, the ballots for the office of President-Elect had been collected and counted and the speaker announced the following results.

The ballots showed that Dr. J. Paul Baird of Dyersburg had been named President-Elect of the Tennessee State Medical Association. (Received 80 votes.)

Following an announcement of the Election for President-Elect, the Speaker appointed Dr. John R. Thompson, Jr., Jackson, Dr. Ernest G. Kelly, Memphis, and Dr. Samuel L. Raines of Memphis to escort Dr. Baird and present him to the membership of the General Scientific Meeting.

Upon returning from the scientific meeting, Dr. Baird was introduced to the House of Delegates and he expressed appreciation for the honor that had been bestowed upon him in naming him President-Elect of the Association.

The Speaker called for any additional old or new business, and there being none, moved on to the next order of business, which was the selection of a place for the meeting in 1957.

An invitation was extended by Delegates from Davidson County to meet in Nashville in 1957. The invitation was accepted.

There being no further announcements or business, the House of Delegates of the Tennessee State Medical Association was adjourned at 10:20 a.m., sine die.

J. E. Ballentine
Executive Secretary

MINUTES OF THE ANNUAL MEETING OF THE COUNCIL

The Council of Tennessee State Medical Association convened in executive session at the Peabody Hotel at 10:00 a.m. on April 9, 1956, for its regular annual meeting. Councilors present were:

Dr. Carroll H. Long	*First District*
Dr. Joe L. Raulston	*Second District*
Dr. Cecil E. Newell	*Third District*
Dr. J. T. Moore, Jr.	*Fourth District*
Dr. D. C. Seward	*Sixth District*
Dr. Carl C. Gardner, Jr.	*Seventh District*
Dr. Leland M. Johnston	*Eighth District*
Dr. W. E. Anderson	*Ninth District*
Dr. Arthur R. Porter	*Tenth District*

Dr. Henry T. Kirby-Smith of the Fifth District was not present.

The meeting was called to order by the 1955 Chairman, Dr. D. C. Seward, and the first business of the Council was to organize for the year 1956. Dr. Seward and Dr. Leland Johnston were nominated for chairman. Following the close of nominations, Dr. Seward was reelected Chairman of the Council for 1956. Dr. Cecil E. Newell was nominated for Secretary of the Council and upon the closing of nominations, Dr. Newell was elected secretary for the year 1956.

Two physicians of the TSMA appeared before the Council, seeking advice relative to a malpractice suit in their county medical society. The Council advised the two physicians to take the matter up with their county medical society and have the county society act upon the matter first. In the event that an appeal was desired, it was stated that either party could appeal the case to the Council. It was the opinion of the Council that the matter should be acted upon locally before the council of the TSMA took any action in the matter.

The Council reviewed affidavits presented in another matter before a County Medical Society member. This case required further legal advice and the Council directed that the matter be presented to the local medical society first. In the event that the medical society or the offending doctor should wish to appeal the case, either party was privileged to come before the Council for a hearing.

Every member of the Council had an opportunity to present any problems in his councilor district, and there being none, the council adjourned its annual meeting.

CECIL E. NEWELL, M.D.,
Secretary

Abstract of Reports of Officers and Committees Read Before the House of Delegates of the Tennessee State Medical Association, April 8, 1956 Hotel Peabody—Memphis

Report of the President

CHARLES C. TRABUE, IV, M.D.

The President, Dr. Chas. C. Trabue, IV, of Nashville reported to the House of Delegates on the manner in which funds were expended during the year for services in behalf of the TSMA. He itemized travel expenses and other items included in the funds established by the House of Delegates in 1955 to defray the expenses of the President. Dr. Trabue pointed out that he had made sixteen trips within and without the State on official business. He reported upon the number of non-scientific speeches made as well as some of the matters covered in the President's Page in the eleven issues of the State JOURNAL. The President reported that the affairs and activities of the Association were among the best in the Nation.

Gratitude and commendation was expressed by the President to the Committees and Committee Chairmen of the TSMA and the members of the Headquarters staff for services rendered to the President and work performed during the year 1955-1956.

Report of the Secretary-Editor

R. H. KAMPMEIER, M.D.

The Secretary-Editor reported that he, with the assistance of the Scientific Committee and Editorial Board, had attempted to keep the JOURNAL of the Tennessee State Medical Association equal to the Journals of other State Medical Societies of approximately the same size.

The 1955 volume contained twenty-five pages less than that of 1954 and the scientific to non-scientific copy was approximately a 65 per cent to 35 per cent ratio.

It was pointed out that the members of the Association had been well advised with the activities of the TSMA in the fields of Public Service and organization through the President's Page and the Yellow sections of the JOURNAL together with editorials by the Editor.

Report of the Board of Trustees

JAMES C. GARDNER, M.D., Chairman and Treasurer

The report stated that the Board of Trustees held two regular meetings during 1955, one immediately following the annual session of the House of Delegates in Chattanooga, and the semiannual session conducted in Nashville in October. No called meetings of the Board were necessary during 1955.

In order to expedite policy decisions without calling a meeting of the Board, members are usually polled on questions by mail or by long-distance telephone. All mail votes are officially confirmed at the next regular meeting of the Board of Trustees and entered in the official records. The report further dealt with actions that were presented before the Board and decisions rendered. These included clearing all financial records, audits and statements, and the appointments of the standing and special committees, plus the committees formed by the actions of the House of Delegates and referred to the Board of Trustees for appointment.

A full report was given relative to the new Headquarters building constructed in Nashville and the method of financing the construction of the headquarters.

The report included the manner in which the Board accepted recommendations and appointment of an Editorial Board to assist the Editor in the work of the JOURNAL of the Tennessee State Medical Association.

In addition to being the interim policy-making body, the Board of Trustees is also responsible for the budget and all finances of the Association. The Treasurer outlined the steps of how the annual budget is established and the manner of control over finances. Exhibits of the annual fiscal audit and quarterly financial statements were submitted as exhibits of the Treasurer's report and these exhibits were available for examination by any member of the House of Delegates, or of the Association.

The Chairman pointed out the many demands for expenditures that are made upon the Board of Trustees and assured the membership that every request was carefully examined and funds were expended with the best interest of the entire Association in mind, taking into consideration funds available during the year.

The report pointed out that the activities of the committees and the general expansion of the Association had called for added expense in carrying out the program of work. A report was also made of the progress of added income as a result of work performed by the Executive Secretary in obtaining additional advertising in the JOURNAL and sale of added exhibit space at the annual meeting. Despite the limited financial resources, the Chairman and Treasurer reported that the Association's fiscal affairs were sound and secure.

Report of the Council

D. C. SEWARD, M.D., Chairman

Dr. Seward's report pointed out that the Coun-

cilors were a very important part of the State Association's activities. The manner of handling matters affecting unethical conduct was reviewed. It was pointed out that the Council had been asked to act as an advisory group in the case of malpractice suits, but it was reported that no cases had been presented to the Council during the year.

The report stated that it was the belief of the Chairman that the profession in general is being faced with fewer malpractice suits and at least some of those carried to trial had resulted in favor of the doctor.

The report further dealt with the Code of Ethics of the American Medical Association, under which members of the TSMA abide. The report outlined unethical procedures, particularly self-laudations involving certain institutions and corporations practicing medicine. It was pointed out that a corporation cannot be licensed to carry on the practice of medicine nor can it engage in the practice of medicine, surgery or dentistry through licensed employees. The report fully dealt with many unethical practices that in many instances are not recognized and the Chairman stated that it was his belief that these matters should be strongly brought before the House of Delegates.

Report of the Executive Secretary

J. E. Ballentine

The Executive Secretary's report revealed the status of various types of membership in the Association as of January 1, 1956. The report revealed that at the beginning of 1956 there were 2,494 members of all classes in the TSMA, which represented a 10 per cent increase over the past two years. It was pointed out that although the membership in the State Association was increasing membership in the American Medical Association had decreased and unless membership was maintained at 2,000 or more members in the AMA, Tennessee would loose one of its delegates to the House of Delegates of the AMA.

The report discussed the major areas of responsibility of the Executive Secretary and the operation of the headquarters office. A complete report on personnel, headquarters building, and correspondence was revealed. It was reported that during 1955 12,908 pieces of first class mail were processed through the central office. This did not include mass mailings to the membership or mimeographed materials. The Executive Secretary reported upon meetings attended, both within and without the state, together with a report of travel.

The finances were thoroughly discussed, particularly financing of the headquarters building. Legislative activities were also revealed, particularly activities upon the National level for which the Executive Secretary is the appointed liaison representative for the Tennessee State Medical Association to the AMA and the Washington Office of AMA.

A report on added revenues for the Association was presented. Status of activities and work carried on in the Journal was reported.

A detailed report of the planning and scheduling of the annual meeting was outlined. In addition, specific responsibilities were outlined for finance and budget control, custodian of records and property, managing editor and advertising manager of the Journal, director of the Tennessee Plan, Office management, organizational services to the House of Delegates, the Board of Trustees, the council and committees of the Association, field organizational services to county medical societies, director of technical exhibits and lectures on insurance and medical economics at the University of Tennessee.

The report also revealed the work performed during the year on the liability and malpractice insurance plan presented before the House.

The report concluded with a review of general headquarters staff activities and a pledge for continued work in behalf of the Tennessee State Medical Association.

Report of the Committee on Scientific Work

R. H. Kampmeier, M.D., Chairman

Other than for a minimum of contributed papers the program had been built, as in past years, through the selection of topics and essayists by the Committee on Scientific Work. In this way the best possible program was obtained from an educational viewpoint. Since the panel discussion was so successful in last year's program it was decided to repeat this in 1956.

The Chairman acknowledged the aid and cooperation of members of the Committee, Doctors John H. Burkhart, W. N. Cook, B. O. Garner, Henry B. Gotten, H. L. Monroe, Lamb B. Myhr, E. White Patton, and Addison B. Scoville, Jr.

Report of the Committee on Public Policy and Legislation

C. M. Hamilton, M.D., Chairman

The report pointed out that 1955 was a year in which the Tennessee General Assembly was not in session, but the Committee on Public Policy and Legislation had been extremely active on the national level. The Chairman reported upon two national and regional meetings that he had attended with other officers of the Association and members of the headquarters staff. An extensive report followed relative to H.R. 7225, the controversial Bill to expand social security. The Chairman pointed out that this Bill is the back door to socialized medicine. It was reported that this Bill would make permanently disabled persons eligible to receive social security benefits at the age of 50 instead of 65. Physicians would have primary responsibility for determining who is disabled. The Chairman stated that this situation could be a handicap to the ethical practitioner and offer opportunity for a racket between the unethical doctor and the unscrupulous individual. Another provision of H.R. 7225 would lower the retirement age for women under social security

from 65 to 62. Passage of H.R. 7225 would bring considerable political pressures upon members of the medical profession.

The report further dealt with other activities in which the Committee had been engaged during the year, particularly contact with the President's office, senators and members of the House of Representatives. The report related the efforts made in behalf of the Jenkins-Keogh Bill, Reinsurance, Bricker Amendment and others in which the medical profession is directly involved.

The results of a survey made by the Tennessee State Medical Association on five particular subjects was reported. The subjects were: (1) whether or not doctors favored compulsory social security for physicians; (2) whether or not doctors favored voluntary social security for physicians; (3) doctors attitude for the passage of H.R. 7225 social security amendments proposed; (4) attitude of the medical profession in Tennessee relative to the Jenkins-Keogh Tax Postponement Bill.

The report concluded with the Chairman pointing out that the Tennessee General Assembly would convene before the House of Delegates met again and the report of the Chairman urged that doctors make themselves available as members of the general assembly or be willing to come before it to be heard on important matters affecting the medical profession in this State.

Report of the Insurance Committee

B. F. Byrd, Sr., M.D., Chairman

The report gave the status of the disability coverage of the membership of the Tennessee State Medical Association in the group plan carried by the TSMA. It was stated that 726 members now carry the state disability plan. All claims had been handled promptly and efficiently during 1955.

The Chairman outlined the great amount of work and effort expended toward obtaining a liability and malpractice insurance plan for members of TSMA. The Chairman reported upon the number of companies contacted and efforts made in trying to find a carrier who would be willing to write this type of insurance for members of the medical profession in Tennessee.

The Chairman pointed out that the Shelby Mutual Insurance Company of Shelby, Ohio, had made a proposal mainly through the efforts of the Farringer Insurance Agency of Nashville, and would render a 20 per cent discount from manual rates in the premiums for members of this Association desiring to carry their malpractice and liability insurance through this company. It was pointed out that if the majority of the profession in the state used this service it would enable a periodic study of experience and thus make it possible to more successfully defend unjust and and excessive claims.

It was also pointed out that a much greater spread of risks could be achieved with members throughout the state participating in such a plan, rather than a small group plan.

Report of the Memoirs Committee

Henry Douglass, M.D., Chairman

The Committee on Memoirs rendered the following report: "During the year 1955, thirty-four members of the Tennessee State Medical Association died. This report is complete and final. It leaves little for comment except that we, in full realization of these facts, will become more dedicated to the cause we serve. We are what we are by right of birth. The past which is our heritage was handed down in trust.

"Medicine is both the beneficiary and the trustee of this legacy. It is not enough that we perpetuate the good that a generation now dead accomplished. It is our obligation within our time and our capabilities to make that good better.

"The problems that we have are different, no doubt, the circumstances under which they arise are exceptional, no doubt. But the purpose and the goal of medicine is and must always remain the same.

"The challenge to our generation is to pass this estate to posterity under the same conditions we received it, not only untarnished but more polished, more brilliant, nay more sublime, than ever before.

"As the curtain falls let us pay our last homage to them by standing."

Following these remarks, a list of the thirty-four deceased members that died during 1955 was read. A moment of silent prayer followed, thus concluding the report.

Report of the Symposium Committee on Postgraduate Education

Frank L. Roberts, M.D., Chairman

A detailed activities and statistical report was rendered by the Chairman of the Symposium Postgraduate Education Committee. It was during the year 1955 that the "Circuit Rider" type of instruction was changed over to the present Symposium type.

The Chairman reviewed the subjects presented in the fall of 1955 throughout the state, such subjects being "Rheumatic Fever," "Jaundice," and "Traumatic and Emergency Surgery". The report dealt with the total number of Doctors registered and total attending the sessions.

The Chairman's report revealed the number that attended the circuit rider type of program as compared with the present program for the first sessions conducted in the fall of 1955.

The report outlined the 1956 program and the subjects and places where they will be presented during the year.

It was stated that it would not be possible at this time to compare accurately the experiences of the circuit rider type of course and the symposium type. A comparison of cost, however, could be presented and it was shown that the budget for the present type of course was $17,400.00 per year

as compared to $32,000.00 per year for the circuit rider type.

The report further outlined the tremendous amount of planning and work necessary to launch the program and in securing 33 essayists to cover the subjects during the year. The Chairman called attention of the membership to the full report of the Postgraduate Education Committee appearing upon the Yellow Page of the March issue of the JOURNAL.

The report further pointed out the question of whether or not the program should be presented in the larger cities. The attendance so far has been poor in the larger centers and it was the recommendation that the program be concentrated in the smaller towns and more rural areas.

Appreciation was expressed for the continued financial assistance given the Postgraduate program by the two medical colleges, Vanderbilt and University of Tennessee, the Tennessee State Department of Public Health and the Tennessee State Medical Association.

Report of the Cancer Committee

R. H. MONGER, M.D., Chairman

The report summarized the activities of the Committee during 1955. It dealt with a review of the activities accomplished to date and the planned projects to be undertaken by the committee during 1956.

One of the projects of the committee is trying to get cancer films, speakers and other material presented before county medical societies. This is being done through the headquarters office of the TSMA wherein cancer films are being sent to those societies requesting such films for presentation at the scientific programs of their county medical societies. This is one of the main projects of the committee for the coming year.

The report included the liaison between the cancer committee of the TSMA and the Tennessee Division of the American Cancer Society.

The report gave a full description of work accomplished in the three grand divisions of the state, particularly the outstanding job done in East Tennessee.

The report further outlined the interests of the Public Service Committee of TSMA in the cancer program, particularly dealing with indigent cancer patients. The report revealed the priority in which cancer patients should be reviewed for funds made available for indigent care through the cancer program. The report stated that "Indigent hospitalization money should only be spent on those patients who: (1) obviously have early malignancies that offer expectations of cure; (2) borderline cases that offer a good chance of cure on palliation; (3) when diagnosis is in doubt and the patient must be hospitalized for diagnostic procedures." The report also revealed the manner in which cases diagnosed that need therapy may request funds through proposed supplemental funds of the American Cancer Society.

Relative to a program for the year 1956, the Committee stated that it believed that projects were being carried on aggressively and that the programs generally should be continued. The committee recommended that a film on cancer be used at some place in the annual meeting scientific program of the TSMA. The recommendation was realized since the scientific program for the year 1956 began with a film on "Cancer of the Thyroid."

Report of the Grievance Committee

DAUGH W SMITH, M.D., Chairman

The Grievance Committee received only one appeal case that had been presented to a county medical society during 1955. The complaint involved monetary consideration. The Committee reviewed the evidence by the plaintiff and heard the defendant in person.

After the State Grievance Committee reviewed the evidence from both parties, it was agreed unanimously that the Doctor involved had not violated any principle of the Tennessee Prepaid Plan.

Report of Committee on Physical Therapy

GEORGE W. SHELTON, M.D., Chairman

During the past twelve months the Committee on Physical Therapy held one informal meeting in Chicago on the occasion of the meeting of the American Academy of Orthopaedic Surgery. No problems were uncovered with regard to physical therapy in Tennessee or to the physical therapists themselves.

It will be recalled that this Committee was active in helping to bring the physical therapists under the Licensing Act for the Healing Arts at the Tennessee Legislature of February, 1955. The Committee stands ready to render assistance and liaison to and with the physical therapists in Tennessee, and to act as a mediation board for any problems which might arise in this area of medical treatment. An increase in the activities of this Committee may well be expected during the coming twelve months during which time the next meeting of the Tennessee Legislature will occur. The Committee will stand guard on bills which might affect physical therapy and its administration in this state. It is the consensus of opinion of the Committee that its activities during the past twelve months have been of a stand-by nature.

Report of the Advisory Committee to State Department of Public Welfare

W. W. HUBBARD, M.D., Chairman

The Committee met in Nashville on November 22, 1955 to discuss with Dr. James N. Thomasson of the Medical Review Board of the Department the problems being encountered in the extension of the program for assistance to the totally disabled.

The particular problem considered was aid to the tuberculous patients.

It was agreed by the Committee that:

1. The Medical Review Board should use a questionnaire devised for obtaining as much additional information as possible from various sources.
2. That cases requiring further determination of status should be referred to the nearest State Tuberculosis Hospital Out-Patient Department for further study.
3. That patients on home treatment of complete or partial bed rest may be considered for assistance for as long as one year.
4. That a tuberculous patient who is allowed to be up for as much as twelve hours per day will no longer be eligible for the program.

Report of the Committee on General Practice

E. L. Caudill, Jr., M.D., Chairman

The Committee reported increasing success in broadening the scope of postgraduate courses aimed primarily for the general practitioner. The marked success of the Memphis Academy of General Practice in their field could well serve as a guide for other component state chapters, especially those located near teaching institutions.

During the past year over fifty new members had been added to the rolls of the Tennessee Academy of General Practice, bringing the total number of members close to the four-hundred mark. In addition, on September 8, 1955 a new component chapter was organized in Morristown with thirteen charter members and was named the Cherokee-Douglass Chapter. This made a total of seven component chapters in the Tennessee State Academy of General Practice.

During the year, a change in classification of acceptable postgraduate study for continued membership in the American Academy of General Practice was announced by the Committee on Education. Classes previously classified as "Formal and Informal" have now been placed in categories I and II. The revised definition of acceptable postgraduate studies may be found in the G.P. or the Tennessee G.P. magazines for October, 1955, or by contacting the secretary of your local chapter.

Report of the Committee on Emergency Medical Service

Frank A. Moore, M.D., Chairman

No formal organized training program was instituted during the past year.

No problems were presented to the Committee for participation and no requests were made of the Committee for any Emergency Medical Service.

One meeting of the Federal Civil Defense Administration, Region Three, was attended by the chairman. A ten day course in "Management of Mass Casualties" at Army Medical Service Graduate School, Washington, was also attended by the chairman. The general consensus of the officers conducting these programs was that they are excellent programs but poor attendance may be expected when sponsored by state organizations.

Your committee recommends that each city in the state organize and maintain its disaster program and that the physicians and hospital personnel have formal plans for emergencies with periodic review of the plan at local staff meetings.

Report of Committee on Industrial Health

Thomas A. Lincoln, M.D., Chairman

The report stated that the principle activity of the Industrial Health Committee during the past year had been the initiation of a survey of Industrial Medical Practice in the State. The report pointed out that it was the belief of the Committee that such a step was necessary in stimulating interest and activity in industrial health not only by the Association, but also by management and labor groups in the State.

The report revealed that 622, or 48 per cent of the physicians indicated that they were doing some industrial or compensation type of practice. There were 27 in-plant full-time and 35 part-time industrial physicians, the remainder conducting their practice either in a hospital, clinic or private office.

The report also revealed that the average practitioner estimated that approximately 7½ per cent of his time is spent on industrial type practice. The report also revealed that 306 full-time and 14 part-time industrial nurses reported being directly involved in industrial health work.

The purpose of the survey was to assist the attitude of management, not only of the amount and quality of industrial medical practice in the State, but to invite suggestions for ways of improving such medical service.

The Committee made three recommendations for future industrial health committees, they being: (1) increased educational efforts for industrial medicine to the working people of the state; (2) the need to review the entire problem of the handling of compensation claims; (3) a yearly meeting of industrial physicians at the time of the annual TSMA meeting would prove valuable.

Report of Prepaid Insurance Committee

James A. Kirtley, Jr., M.D., Chairman

The report outlined the growth of the Tennessee Plan during the past year and stated that an additional 250,000 persons had been added to the plan since September 1, 1954. Data gathered at the close of June, 1955, shows that 898,253 persons were covered under the Tennessee Plan and that incomplete returns at the close of December, 1955, revealed that more than one million persons were covered in this State. Some 1,700 participating physicians representing approximately 72 per cent of the membership of the TSMA cooperate with the plan as participating physicians. It was reported that 36 commercial insurance companies and two non-profit associations acted as underwriters, selling the plan to the citizens of Tennessee.

The Chairman reported upon the efforts of the Committee to expand the plan to cover an "In-Hospital Medical Care Plan." He outlined the

committee's work with the Health Insurance Council, which is an advisory committee for the commercial insurance industry, and representatives from the non-profit associations. The Health Insurance council and the advisory group from the non-profit associations were requested to recommend a type of "In-Hospital Medical Care Plan" that might be presented for consideration by the TSMA. The first plan presented by this group was not acceptable to the committee and they were asked to again study the matter and to submit another proposal along the principles of a deductible plan.

It was reported that the Committee had also taken under consideration the advisability of a second type plan with a higher fee schedule than the present Tennessee Plan for those persons making beyond the $4,200 maximum income provided under the present plan. It was reported that this matter is now being thrashed out within the Committee and a report should be forthcoming in the near future.

The Chairman reported also that the Committee was studying the present Tennessee Plan to determine if something could be done relative to revision of fees on some of the known inequities that exist in the present schedule. It was stated that the Executive Sub-Committee is sudying this matter.

The report revealed that the trend in surgical and health insurance is toward a more comprehensible over-all coverage with a deductible feature. Such a policy might tend to check the steady annual percentage increase in hospital admissions by insured patients as well as provide more flexibility for medical and surgical benefits.

The Committee reported that the "insurance of tomorrow" may be far superior to the existing plans and policies and stated that the Committee was constantly in touch with new suggestions and developments and asked continued support of the Tennessee Plan from the profession for the present.

The report also pointed out the administrative load in carrying on the operation of the plan. The Chairman outlined the manner in which the problems are referred to the headquarters office and the executive committee of the Prepaid Insurance Committee.

The Chairman related the studies made by the Committee toward further expansion of the plan to cover other specialties. The report revealed that it was the committee's opinion that the most pressing expansion should be in the field of medical benefits.

Report of the Public Service Committee

L. W. Edwards, M.D., Chairman

This report stated the efforts of the Committee to urge County Courts to vote for participation in the Medical Care for the Indigent Program sponsored by the TSMA. It was reported that to date, 87 out of 95 counties had elected to come under the State-County subsidized program.

Perhaps one of the most important aspects of the indigent hospital program was the decision on the part of the Committee to cooperate in an effort to have indigent cancer patients who can be helped by hospital care brought under the provisions of the Indigent Hospital Act. By bringing representatives of the Tennessee Cancer Society, State Board of Health, the County Judges Association and the Public Service Committee together, an agreement was reached whereby the appropriation requested for the indigent hospitalization program would be $900,000.00 for the next biennium.

The report also revealed many of the other activities and work performed by the Public Service Director, who had become associated with the TSMA during the past year.

The report dealt in detail with the television relations program for the TSMA and the creation of a Press Award to better press relations and encourage top-level medical news reporting in the state. A television relations plan was put into effect and a number of series of medical TV forums had been completed.

The report revealed in detail the assistance rendered to the national television program from Meharry Medical College in Nashville under the title "Medical Horizons."

The report also revealed the proposed manner in which the Press Award will be made for the outstanding medical writing in the state.

It was pointed out that a coordination plan between the Tennessee Medical Foundation and the TSMA to facilitate the placement of doctors in areas without sufficient medical services had been completed. This plan would prevent a great deal of overlapping between the Foundation and the TSMA.

The report also listed assistance rendered to citizens of many communities in the state organizing clinics and in obtaining a doctor. It was pointed out that the Public Service Committee operated the placement service page in the Journal advising physicians and communities of places and physicians available.

The Public Service Committee continued and enlarged services afforded by the Association to nursing schools and organizations. The Practical Nurses Association had been supported in its continued organization. A public opinion survey of college and university students in Tennessee had also been conducted by the Committee. The survey seeks to determine the extent to which attitudes about doctors and the medical profession are influenced on college campuses and in the classrooms.

The Chairman expressed his appreciation to all members of the Public Service Committee, the office headquarters staff, to Dr. Sharp and Dr. Hutcheson of the State of Tennessee and those persons who had worked so earnestly in the efforts to carry out the projects of the Public Service Committee.

Report of the Liaison Committee to the U.M.W.A.

B. M. Overholt, M.D., Chairman

The Committee had received no complaints from physicians of the area administrator of the U.M.W.A. during the past year. As far as could be ascertained by the committee, there had been accord on all matters between organized medicine and the U.M.W.A.

One letter was received during the past year expressing the opinion that certain general practitioners' services should be paid for by the U.M.W.A. The committee had taken this matter under advisement.

Report of the Advisory Committee to the Woman's Auxiliary

W. W. Hubbard, M.D., Chairman

There had been no meeting of this Committee during the year as no problems had been referred to it. The program of the Auxiliary has progressed very satisfactorily.

Report of the Committee on Veterans' Affairs

Wm. J. Sheridan, M.D., Chairman

The Committee on Veterans' Affairs had not been too active during the year 1955. The Chairman reviewed the work of the committee in previous years and pointed out that the committee had vigorously, although unsuccessfully, sought the endorsement of the American Medical Association for the enactment of Federal legislation which would make available to low income groups of veterans some type of medical and hospital insurance policy to cover their acute non-service-connected illnesses. The premiums on such policies were to be paid by the Federal Government.

The report stated that it was the opinion of the Committee that further pursuance of this program be discontinued for the time being at least. Any hope of securing endorsement of this program will require much more ground work in the AMA.

The Committee recommends the continuance of the Committee in order to have available an organized body that can be set in motion on short notice to consider such matters as may be pertinent and such matters as may be referred to it by the House of Delegates.

Report of Rural Health Committee

W. N. Cook, M.D., Chairman

The Rural Health Committee carried on a year-long program of coordination with county groups, 4-H clubs, and other interested agencies.

Two specific projects undertaken were the organization of a state-wide conference on rural health, and the sponsorship of a senior day at the three medical schools in Tennessee.

The Rural Health Committee has been polled on both of these projects and both have found favor with its membership.

Senior day programs will be sponsored in the medical schools with the cooperation of the General Practitioners Association.

The Committee feels that without further ground work it would not be advisable at the present time to stage a state-wide rural health conference.

The Rural Health Committee Chairman and the Public Service Director attended the Rural Health Conference at Little Rock, Arkansas, June 27th. Data was gathered for future planning in the organization of a state-wide health conference for Tennessee at this meeting.

In addition, the Rural Health Committee lent assistance to the Indigent Hospitalization Program by encouraging counties not under the plan to become participants. The Committee feels that there are a number of rural health problems in Tennessee which can be solved in time. However, this Committee has a job of organizing which must be accomplished at the county level before any significant progress can be shown.

The job of organizing has progressed markedly in the last twelve months, and within the next year it is the hope of the Committee that Tennessee will be sufficiently prepared for a state-wide conference on rural health.

Report of the Tuberculosis Committee

Robert L. McCracken, M.D., Chairman

The Tuberculosis Committee has served primarily as a stand-by committee during the past year. There have been no meetings of the committee. The Committee commended the State Health Department for the increased hospital facilities now available in caring for the tuberculosis patient and the marked decrease in the instance of tuberculosis and tuberculous death rate in Tennessee.

Report of the Committee on Mental Health

Frank H. Luton, M.D., Chairman

It was reported that only one formal meeting of the committee had been held during the past year. The Chairman outlined the work of Dr. Hauk in developing a new intensive treatment service at Central State Hospital. The report outlined the work being performed and planned in the Guidance Center organized in Nashville and further stated that the treatment center will focus primarily at work on the treatment of mental problems of childhood, but will also serve some adults.

It was reported that members of the Committee had attended the National Conference on Mental Health in Chicago. It was revealed that the Tennessee Bill for licensing of psychologists was somewhat controversial and that steps should be taken in Tennessee to modify the existing law. It was stated that this law had been of considerable concern to the Tennessee Psychiatric Association and the Committee on Mental Health. It was suggested that the law be reviewed and modified and such efforts be made in the next legislature to correct these inadequacies.

The report pointed out that the Woman's Aux-

iliary to the Tennessee State Medical Association had been active in the Mental Health field during the past year and that the Committee had done particular work in: (1) education in mental health; (2) legislation leading toward facilities in treatment and prevention, and (3) research.

The Committee's work was summarized with the following recommendations:

1. Participation in state-wide activities in the field of mental health leading toward the improvement of facilities for service, for training of personnel and for the development of research in the area of mental health.
2. Liaison between this Committee and the Legislative Committee regarding changes in the existing law which licenses clinical psychologists to practice psychotherapy.
3. That a closer relation be fostered between the Committee and the State Department of Mental Health.
4. Liaison with the Woman's Auxiliary Committee on Mental Health.
5. The inclusion of a pediatrician and a general practitioner in the membership of the Mental Health Committee.
6. Authorization by the House of Delegates for the Commissioner of Mental Health to write a letter to the members of the State Medical Association concerning the need for caution in the completion of commitment papers.

Report of the Autopsy Committee

LELAND M. JOHNSTON, M.D., Chairman

This Committee is primarily a stand-by committee to work with the morticians and since no problems had arisen during the year no further report was necessary.

Report of Committee on Health Project Contest

MRS. OLIVER H. GRAVES, Chairman

It was reported that the Health Project Contest sponsored by the Woman's Auxiliary to the TSMA enjoyed its most successful year in 1955. Eleven groups in nine high schools in Tennessee were reached by the contest. A total of 1,973 students participated. Inquiries from a number of states other than Tennessee were received relative to the contest. It was pointed out that certification from the State Board of Education was received and the contest was distributed through the facilities of the Board of Education. Private, parochial and public high schools in Tennessee received rules of the contest and additional material which encouraged them to participate. Also, the University of Tennessee Extension Service cooperated by lending its Extension Service Library free of charge.

The Woman's Auxiliary added a $100 second prize to the contest in addition to the $500 bond given by the Tennessee State Medical Association.

The report stated that the Health Project Contest has proven to be the most effective method of making young people in the state more aware of the importance of good health in relation to other human values.

Report of Committee on Liaison to Organized Labor

DAUGH W. SMITH, M.D., Chairman

The report stated that although an official meeting of the Committee had not been held, the committee had kept in constant touch with organized labor in Tennessee. It was pointed out that the Tennessee State Medical Association in cooperation with the Tennessee Medical Foundation and organized labor had diligently worked to obtain the bill passed in the legislature on "Hospital Service for the Indigent."

The report stated that many talks with representatives of labor had been held relative to promotion of health insurance. It was reported that many unions, in collective bargaining and outside of collective bargaining, strongly supported the Tennessee Plan as a fair and reasonable service program.

Report of Legal Liaison Committee to the State Bar Association

GEORGE K. CARPENTER, M.D., Chairman

The report briefly reviewed the formation of the Legal Liaison Committee to the Tennessee State Bar Association and some of the activities since the formation of the Committee in April of 1954. The report stated that medicolegal clinics, sponsored jointly by the County Medical Societies and the County Bar Associations had been successfully conducted over the State. It was reported that in April, 1955, such medicolegal clinics had been conducted in Chattanooga, Jackson, Johnson City, Knoxville, Memphis, and Nashville. It was pointed out that other medicolegal clinics were scheduled for 1956.

The report dealt with various doctor-lawyer relationship codes. It was stated that the Tennessee State Bar Association has recently appointed a committee of attorneys to study the advisability of setting up a formal code in Tennessee.

The report pointed out that the medicolegal liaison committees of the Bar and Medical Associations had accomplished much. Not too long ago, it was stated, certain undesirable legislation appeared in our state legislature and the passage of undesirable bills would have worked a hardship on physicians. Since inception of the medicolegal committees, no organized efforts have been made to obtain legislation undesirable to physicians. The report stated that the problems of the doctor and lawyer are better solved by a mutual understanding of each others problems. The report recommended that the legal liaison committee be continued.

Report of the Liability Insurance Study Committee

CARROL C. TURNER, M.D., Chairman

The Liability Insurance Study Committee was

appointed by the Board of Trustees in April, 1955, for the purpose of meeting when required, with the Commissioner of Insurance and Banking in the State of Tennessee, in the event that further premium increases occurred on malpractice or liability insurance. It was the purpose in establishing this committee that its members should council with the Commissioner on Insurance and Banking in an effort to curtail the continued rise in liability and malpractice insurance rates.

For the past year, at least, rate increases have not been made and to some extent the situation has stabilized.

In the event that the TSMA should receive notice of any type of an increase in the present premium rate for malpractice and liability insurance, this committee would immediately go into action and council with the Commissioner in an effort to obtain all of the facts and present any available information to the Commissioner that might thwart further increases in premiums on liability insurance.

Report of the Headquarters Building Committee

Daugh W. Smith, M.D., Chairman

The Headquarters Building Committee, composed of Drs. Charles C. Trabue, IV, R. H. Kampmeier and D. W. Smith, submitted to the Board of Trustees at their meeting in April, 1955, a set of plans and specifications, together with a proposal from the lowest bidder, for an office building to be erected on a lot located at 112 Louise Avenue in Nashville. The Building is situated on a corner lot at the intersection of Louise Avenue and Hayes Street, near Vanderbilt University and in the midst of the hospital area. Two main east-west thoroughfares are within one block of the building.

The Board of Trustees approved the plans and construction proposal as submitted by the Committee, with instructions to proceed with the erection of the Headquarters Building. The lowest bid, which was accepted, was $36,969.00, with rock excavation being extra cost.

After the Building was under construction, the Committee realized the lower or basement floor could be utilized for a work room, with a great space-saving advantage. It was decided to lower the floor, add windows, change the plumbing arrangement, and provide heat and air conditioning in the basement area. The additional space of 1,255 square feet was built at a cost of $2,142.00. Excavation of rock was done on a unit price totaling $1,522.00. Total cost of the building was $41,744.10, plus the cost of the architect.

The Building contains 3,815 square feet of floor space, is fireproof, and is attractively arranged. By completing the basement floor, the additional space is available for added personnel if the need should arise.

Report of the Committee on Constitution and By-Laws

John R. Thompson, Jr., M.D., Chairman

The report of this committee dealt altogether with the revision and modernization of the present Constitution and By-Laws.

The report stated that each member of the House of Delegates had a copy of the Constitution and By-Laws as well as a revised and modernized copy of the Constitution and By-Laws as proposed by the Committee.

The Chairman pointed out the significant changes in the modernized version against the old Constitution and By-Laws. Each member of the House was urged to carefully study the modernized Constitution and By-Laws and support the changes submitted by the committee since much time and study had been made and it was the committee's recommendation that the revision would prove of considerable benefit to the Tennessee State Medical Association.

Report of the Study Committee for Expansion of General Practice Services of the UMWA Welfare and Retirement Fund

George S. Mahon, M.D., Chairman

This report stated that the purpose of the committee was defined as the study of the possibilities for, and mechanics for an extension of the medical benefits of the UMWA Welfare Fund Program into the field of "non-specialist care for non-hospitalized beneficiaries" of the Fund's program.

The report dealt with the background of the study and the accumulated experience of the Fund in which manner payments are made in five major categories of medical services to the beneficiaries of the Fund.

It was the Committee's recommendations that an extension of the Fund's present medical care program was desirable from the viewpoint of all concerned. The Committee's recommendations for accomplishing this plan were as follows:

1. The initial program should provide for diagnostic office studies and other limited procedures as may be evolved in agreement with the Fund.
2. Every member of the TSMA is eligible to make application for participation with the understanding that acceptance will be contingent upon meeting "minimum standards of facilities."
3. Certain recommendations were made relative to the personnel, authority and jurisdiction of the governing committee.
4. Medical audit and control of the proposed program of extended medical care was believed to be vital to the success of such a program. It was recommended that the TSMA should assume responsibility for the audit and control phase of the proposed program and that the TSMA exercise the responsibility through this committee.

* * *

The following committees did not make a report:
Committee on Hospitals
Liaison Committee to Public Health Department
Committee on Blood Banks
Liaison Committee to Public Health Council
Liaison Committee to Tennessee State Dental Association

SPECIAL REPORTS

Report of the Woman's Auxiliary to the Tennessee State Medical Association

Mrs. Roy A. Douglass, President

The report dealt with several important phases of the work of the Woman's Auxiliary to the TSMA, and the President stated that sixteen auxiliaries with a membership of 1,146 represented the total membership in the state organization.

It was pointed out that more than half of the Auxiliary had been active in the work of nurse career days and definite results had been obtained in getting recruits.

One of the most important activities had been the American Medical Education Foundation. It was reported that 1,023 dollars had been contributed towards this project, the money going to the medical schools.

It was reported that the Auxiliary had surpassed its quota in subscriptions to *Today's Health*.

Great results had been realized in the Auxiliary Public Relations Program. Every Auxiliary in the state had reported successful projects in schools, colleges and many other state and community organizations. The report stated that one large Auxiliary alone contributed more that 945 hours a week in public service projects.

The Health Project Contest was outlined in detail and the report stated that a second prize of a $100 bond had been added to the first prize of a $500 bond presented by the Tennessee State Medical Association. Other projects included work carried on in the mental health field, legislation, the Tennessee Medical Foundation, Doctors Days and a number of social activities conducted by the various county auxiliaries. The report pointed out that the Auxiliary had perhaps closed one of its most successful years and that the organization was growing in membership and developing in stature.

Report of Delegates to AMA

Chas. C. Smeltzer, M.D., Chairman

The Chairman outlined his report in some detail of the business transacted at the June, 1955, meeting in Atlantic City of the House of Delegates of the AMA. The report stated the officers elected and many of the measures adopted by the House of the AMA and explanation was given on the passage of a number of important issues. These included the osteopathic issues, change in medical ethics, dispensing of drugs and appliances by physicians, internship approval programs, hospitals accreditation, polio vaccine as well as many other minor pieces of business brought before the AMA House of Delegates.

The Chairman also reported upon the December meeting of the Clinical Sessions of the AMA House which convened in Boston. This meeting dealt with old age and survivors insurance coverage of physicians, a report on medical practices, guides for grievance committees, medical ethics, medical education contribution and others.

A full and detailed report covering minute transactions in the House of Delegates of the AMA was contained in the official report.

Minutes of the Annual Meeting of the Board of Trustees of The Tennessee State Medical Association April 11, 1956—9:00 A.M. Hotel Peabody Memphis, Tennessee

The Board of Trustees of TSMA convened on April 11, for the annual meeting following the final session of the House of Delegates, in the Hotel Peabody in Memphis. The following members of the Board were present:

Dr. James C. Gardner, Chairman, Nashville
Dr. Chas. C. Trabue, IV, Nashville
Dr. Carrol C. Turner, Memphis
Dr. R. N. Buchanan, Jr., Nashville
Dr. Harmon L. Monroe, Erwin

Ex-officio members present were:

Dr. R. B. Wood, President, Knoxville
Dr. J. Paul Baird, President-Elect, Dyersburg
Dr. R. H. Kampmeier, Secretary-Editor, Nashville

Others present were:

Mr. J. H. Ford, Jr., Public Service Director, TSMA
Mr. J. E. Ballentine, Executive Secretary, TSMA

I. The meeting was called to order by the Chairman and the minutes were approved, as previously mailed, of the October semiannual meeting of the Board. The Chairman welcomed Dr. Monroe and Dr. Baird, new members of the Board, expressing the pleasure of the Chairman of having the newly elected members present at the meeting.

II. Old Business:

(1) Official approval was given of the mail ballots taken in February relative to increasing advertising rates in the JOURNAL for advertisements obtained through the State Journal Advertising Bureau. The Board members had been previously polled relative to a 15 per cent increase in advertising rates. This action made the mail ballot official and the 15 per cent increase was approved.

III. New Business:

The Executive Secretary outlined the item of janitors supplies and maintenance equipment purchased to operate the new headquarters building. The total cost of all items approximated $450.00 and the Board officially approved this amount for payment of those items purchased to maintain the headquarters building.

IV. The official audit of the fiscal affairs of the Association for the year 1955, as submitted by the firm of Osborne & Page, Certified Public Accountants, was examined by the Board and approved. Copies of the audit were furnished members of the Board and following discussion and clarification official approval was given of the financial audit.

V. A financial statement covering the first quarter of 1956 was presented to the Board for examination. Several items in the budget were questioned by Board members, particularly office supplies and postage, and an explanation on these items was furnished by the Executive Secretary and the Public Service Director. The Chairman of the Board and Treasurer was authorized and directed to write a letter to the Chairman of the Public Service Committee pointing out the over-expenditures in postage, stationary and printing in the Public Service Budget. The Treasurer was authorized to supplement this item in the Public Service Budget if found necesary. The motion was made by Dr. Trabue, seconded by Dr. Buchanan and passed.

VI. The Treasurer reported to the Board relative to the status of financing in construction of the headquarters building. It was requested that $250.00 be transferred from the General Fund to the Building Account to wind up all outstanding debts relative to construction of the headquarters

From the Executive Secretary

ORGANIZATIONAL NEWS

Liability and Malpractice Proposal Given Approval By House of Delegates

● The Liability and Malpractice insurance proposal presented to the TSMA by the Shelby Mutual Insurance Company through the Farringer Agency and participating agencies throughout the State was approved by the House of Delegates at the Annual Session in Memphis earlier in April. Members of the TSMA have received a letter and brochure giving the full details about the plan. This plan will enable members of the Association to obtain coverage at premiums 20% below the manual or Bureau rates now being paid. Investigation by the Insurance Committee reveals the solidarity of the Shelby Company. Upon receiving full details, if you have further questions, contact the TSMA headquarters office and your questions will be promptly answered.

Annual Meeting Highlights—Registration

● TOTAL REGISTRATION—638
(467 physicians, 36 students and internes, 115 exhibitors, 20 staff personnel and assistants.)

This represents a considerable increase over the meeting held in Memphis in 1953. Total registration of the Woman's Auxiliary—140 members. Exhibitor revenue—$7,025.00—an all time high for income. This represented income from 47 participating exhibitors, the largest number ever to exhibit at a state meeting. The Exhibitors Liaison Committee rendered outstanding assistance. They settled many problems that arose on the floor and made the exhibitors relations with this Association a smooth operation.

The workroom was fully equipped and staffed by competent members of the Headquarters Office. A great deal of work was turned out for members of the House of Delegates, the Woman's Auxiliary, Committee Chairmen, Officers and others who needed secretarial assistance.

The President

● Dr. R. B. Wood of Knoxville assumed the Office of President of TSMA, succeeding Dr. Chas. C. Trabue, IV. Dr. Wood is an able leader and will carry on the great traditions of former presidents of the Tennessee State Medical Association in conducting the affairs of organized medicine in this State.

President-Elect

● Dr. J. Paul Baird of Dyersburg was named President-Elect and will assume office in April, 1957. No member of TSMA has given more unstintingly of his time and efforts to the cause of organized medicine than has Dr. Baird. The Association will be assured of continued leadership of the highest quality when Dr. Baird takes the reins as President in 1957.

Other Officers Elected

● Dr. H. L. Monroe, Erwin, was elected a member of the Board of Trustees, representing East Tennessee. Other officers elected were Dr. John Thornton, Jr., of Brownsville, Dr. Kenneth L. Haile of Cookeville and Dr. Rae B. Gibson of Greeneville, as Vice-Presidents. Dr. Carroll H. Long, John-

son City, Dr. Carl Gardner, Columbia, and Dr. W. E. Anderson, Dyersburg, were new members elected to the Council.

121st Annual Meeting Reveals a Growing Association

● These pages contain the abstracted records of all official proceedings of the House of Delegates and other official actions. Practically all of the scientific material presented in the scientific meeting will be printed in future issues of the JOURNAL. The May JOURNAL is the annual meeting reference number and the larger proportion is devoted to the "Organized" or "Business" side of medicine. Official minutes of the Council, the Board of Trustees, and abstracts of committee reports and the general sessions of the House of Delegates are reported.

A Membership Report

● As of January 1, 1956, the active members of TSMA numbered 2,276 with an additional 188 veteran members. Thirty members have been reported by the County Societies as being in Military Service. The total active, veteran and service membership totals 2,494 members as of the beginning of 1956. This represents a 10% increase in the past two years and more than a 5% increase since January 1, 1955. Tennessee is no longer considered a small state medical association, but is now classified in the medium large category. The Association's membership is now the largest in its history.

Special Activities At the Annual Meeting

● Among the highlights of the annual meeting was the President's Night Banquet where Dr. F. J. L. Blasingame, of Wharton, Texas, was the guest speaker. Dr. Blasingame spoke on the subject of "Organized Medicine and Its Role in Modern America." More than 275 doctors and their wives along with invited guests of other professional groups were in attendance. The Banquet was presided over by the retiring President, Dr. Chas. C. Trabue, IV, and at the completion of Dr. Blasingame's address, Dr. Trabue presented the gavel to the new President, Dr. R. B. Wood.

G. P. Award

● Perhaps the feature presentation of the meeting was that made to Dr. May Wharton of Pleasant Hill, recipient of the award for the outstanding general practitioner in the state. A most effective presentation speech was made by the speaker of the House of Delegates, Dr. Robert N. Buchanan, of Nashville, who made the award to Dr. Wharton. Dr. Wharton has made an outstanding contribution to medicine in this state through her services as a physician in the Upper Cumberland Area.

Special awards went to the winners of the Health Project Contest and these awards were made in the House of Delegates. The winners were represented by Mrs. Betty Hockensmith, Teacher; and Miss Bobbye Holcomb and Miss Frances Carden, students representing the Lee Academy of Cleveland, Tennessee.

Business Conducted

● Business-wise, the House of Delegates operated with maximum efficiency. You are again referred to the abstract of the proceedings of the House of Delegates and the Board of Trustees as well as those of the Council. All committee and officer reports are contained in this issue and bear testimony to the outstanding job performed by the membership. Tennessee continues to be among the leading state medical associations in carrying out worthwhile projects at a time when organized medicine needs effective leadership.

Woman's Auxiliary

● The Woman's Auxiliary also conducted another outstanding meeting in conjunction with the TSMA. Mrs. E. T. Pearson of Elizabethton was installed as President and Mrs. Joseph D. Anderson of Nashville was named President-Elect for 1957. The Auxiliary has been most active in sponsoring the Health Project Contest and many other worthwhile projects.

Public Service

THE TENNESSEE TEN

Dr. Blasingame Congratulates Dr. Wharton, T.S.M.A. G.P. of the Year



CAT.

Dr. F. J. L. Blasingame, (left) A.M.A. Trustee from Wharton, Texas, and keynote speaker at the T.S.M.A. President's Night Banquet held during the Annual Meeting, April 8-11, congratulates Dr. May Cravath Wharton at the banquet after she was named Tennessee's Outstanding General Practitioner of the year.

CAT.

● "My calls were coming in now from all directions—Pomona, Claysville, Pilot Knob, Ridgedale, Ravenscroft and Neverfail."

Thus in her own words Dr. Wharton tells how her practice in the isolated Cumberland Mountains began.

Now eighty-three, Dr. Wharton still carries on her practice. She received her medical degree from the University of Michigan in 1903 and came to Pleasant Hill, Tennessee, in 1917 as the wife of the principal of Pleasant Hill Academy.

In those early years she walked, or rode horseback and muleback, through all types of weather and over some of the most rugged terrain in the Eastern United States. On these errands of mercy she was called on to ford dangerous mountain streams in the dead of night. She crossed slippery footlogs spanning rock-filled gorges in order to save a few miles, when, in some isolated mountain cabin, life hung in the balance.

Her autiobiography, Doctor Woman of the Cumberlands, was published in 1953. No record of service and sacrifice by any physician can match this simple but eloquent narrative of travail and hardship among a forgotten people.

She was born into a pioneering family in Minnesota. As a child she helped with the chores and became an accomplished equestrienne. During the course of her education she attended Carleton College, the University of North Dakota and the University of Michigan medical school.

Her work with the mountain people began during the flu epidemic of 1918. It was during the epidemic that she first came to realize that medical service was practically unknown to the people she served. With this realization there was born in her the determination to bring better health at lower cost to the people of the Cumberland Plateau.

After her husband's death she considered returning to New Hampshire where she had, some years before, engaged in rural health work. A delegation of fifty mountain people who begged her to remain changed her mind. Beginning with a house containing two standard hospital beds, she was able in 1937 to add a thirty-bed pavilion to take care of tuberculosis patients. Known as Uplands Cumberland Mountain Sanatorium, this institution for many years furnished the only free beds for indigent patients outside of the four large urban counties of Tennessee.

Efforts Rewarded

● Her continued efforts were rewarded in 1950 by the establishment of the Cumberland Medical Center. Her service to humanity was recognized in 1953 when Carleton College presented her with its Alumni Achievement Award, and again in 1954 when she was presented the Kranz Memorial Award of the Tennessee Tuberculosis Association for her work in tuberculosis control.

Only last month another of Dr. Wharton's dreams neared reality with the assurance of sufficient funds to build a forty-bed nursing home for the aged and launch a plan under which retired people may live in small cottages about the Uplands hospital until they need nursing care.

Dr. Wharton herself has summarized a life of service and dedication in the last paragraph of her autobiography.

No Longer In Danger

● She writes: "Perhaps in time there will be no forgotten ones among us. With Cumberland Medical Center, as the plaque in the lobby attests, 'Dedicated to the health and welfare of the people of the Cumberland Plateau,' just as Uplands has always been, even the least of God's children scattered over our hills are no longer in danger of being passed by."

building. The motion was made by Dr. Buchanan, seconded by Dr. Trabue and passed.

VII. The Board heard a report from Dr. Gardner relative to furnishing the Conference Room in the new headquarters building. The Board directed that the Chairman and the Executive Secretary investigate the best ways and means of obtaining furniture and chairs for the Conference room. Dr. Wood moved that a Sub-Committee of the Board consisting of the members residing in Nashville be authorized to select the type of furniture to be placed in the Conference Room and that the best possible type for the money spent be obtained. The motion was seconded by Dr. Monroe and passed.

VIII. A bid from the Sessions Paving Company was presented for grading and putting an asphalt top on the parking lot in the rear of the headquarters building. An amount not to exceed $667.00, submitted in the bid, was approved by the Board for this project. The motion was made by Dr. Wood, seconded by Dr. Monroe and adopted.

IX. The Executive Secretary questioned the Board relative to an official dedication of the new headquarters building.

A motion was made by Dr. Monroe and seconded by Dr. Turner to officially dedicate the headquarters building during the 1957 annual meeting in Nashville. It was determined that open house be held at the headquarters building during the 1957 meeting and the motion was further amended to the effect that the Building Committee composed of Dr. Trabue, Dr. Kampmeier and Dr. D. W. Smith, acting as Chairman, be in charge of the dedication ceremonies. The motion as amended was adopted.

X. Official approval was granted to exchange some old equipment formerly used by the Postgraduate Committee for a new projector, needed by the Symposium Postgraduate Education Committee in the conduct of its programs. The Board approved the purchase of the new projector and directed that it be paid for from the budget for the Symposium Postgraduate Education Committee.

XI. Dr. Kampmeier discussed the matter of accumulating old medical instruments and other items for historical purposes and display them in the new headquarters building. It was suggested by Dr. Wood that a Committee for permanent building appointments be named. Dr. Wood presented this motion and Dr. Trabue amended it to the extent that the Committee not be authorized to make any expenditures without authority of the Board of Trustees. The motion as amended was seconded by Dr. Monroe and the Board named the personnel that composed the Headquarters Building Committee to act as a *Committee on Appointments and Furnishings* for the new headquarters. This Committee will screen any gifts presented and determine what furnishings of historical nature should be housed in the headquarters. (Committee composed of Dr. D. W. Smith, Chairman; Dr. Chas. C. Trabue, IV, and Dr. R. H. Kampmeier.)

XII. The Executive Secretary outlined to the Board the matter of surrendering the charter of the old circuit rider postgraduate instruction committee. Since this was an item that required legal advice, the Board appointed Dr. Buchanan to look into the matter and report to the Board. The motion was made by Dr. Trabue, and seconded by Dr. Turner and adopted.

XIII. The Board went into executive session. The Chairman of the Board presented a suggestion for salary adjustment for the Executive Secretary. The salary of the Public Service Director was also reviewed. The Board approved that the salaries of the Executive Secretary and the Public Service Director be adjusted, effective May 1, 1956.

XIV. The Board resumed with the agenda and followed with discussion of items referred to it from the House of Delegates. The State-wide County Society Officers Conference was discussed as a result of Resolution #2 establishing the conference. It was moved by Dr. Buchanan and seconded by Dr. Trabue that the Executive Secretary and the Public Service Director determine the program and obtain final approval from the President. It was suggested that the meeting be held in the late fall with the date to be approved by the President. A personal letter from the President to all officers of county medical societies was believed to be the most effective means of obtaining interest in attendance by offi-

cers of county medical societies. This motion was adopted.

XV. The Board approved the printing and mailing of the "Principles of Medical Ethics" as directed by the House of Delegates. The booklet will be forwarded to all members of the Tennessee State Medical Association. The motion was amended to include a copy to be sent to the deans of the medical schools in Tennessee and the administrators of all hospitals in the State. The motion was made by Dr. Turner, amended by Dr. Monroe and seconded by Dr. Wood, after which the motion was adopted.

XVI. The Board discussed the Resolution relative to a financial grant to the Rural Health Committee. The Board discussed in some detail the matter presented by the Rural Health Committee for the expenditures of funds requested. Following discussion, motion was made by Dr. Monroe and seconded by Dr. Turner, directing the Chairman of the Board to write a letter to the Chairman of the Rural Health Committee stating that the Board of Trustees believe that money could be more advantageously spent in expanding activities of the program rather than making any grants to any individual group. This motion was passed.

XVII. As directed in Resolution #13, adopted by the House of Delegates, the Board of Trustees was directed to appoint a committee to review legal definitions of medicine and medical practice and make its study and report to the Board of Trustees before November 1, in order that such information could be forwarded to the Legislative Committee prior to adopting the official legislative program for 1957. A "Study Committee on Legal Definition of Medicine and Medical Practice" was named and charged with the responsibility of studying such matters that should be brought before the Legislature. The Committee was instructed to make its report to the Board prior to November 1, 1956. The Committee will be composed of Dr. Carrol C. Turner, Chairman, Memphis; Dr. W. W. Wilkerson, Nashville; Dr. Ralph H. Monger, Knoxville; Dr. T. P. McKeen, Johnson City, and Dr. Marcus J. Stewart, Memphis. The motion for appointment was made by Dr. Wood and seconded by Dr. Monroe and adopted.

XVIII. As directed in Resolution #7 adopted by the House of Delegates, the Board was directed to investigate the formation of a memorial trust to accept gifts for medical charities. It was the consensus of opinion among the Board members that this was a matter that required legal advice and it was determined that such advice should be obtained from the Association's attorney, Mr. Chas. Cornelius, Sr. The Board will obtain this information and report at the fall meeting.

XIX. The Board discussed generally many activities affecting hospitals, particularly the matter of hospitals practicing medicine. It was felt that the Hospital Committee of the Association had not functioned actively in the past and the Board instructed the Chairman to write a letter to the new Chairman of the Committee on Hospitals, urging that the Committee become more active and look into many of the matters affecting doctors and hospitals and make a full report to the House of Delegates in 1957.

XX. The Chairman of the Board was directed to write to Mr. Stanton Smith, a labor representative, for appointment to the Prepaid Health Insurance Committee and also to Mr. Sam A. Buchanan, a Director of General Shoe Corporation, for a position on the same committee.

XXI. Dr. Carroll Turner queried the Board for an opinion relative to members of local medical societies belonging to the Tennessee State Medical Association.

Members of the Board pointed out that Article IV, Section 2, of the Constitution of this Association stated that the "active members of the County Medical Societies shall be the active members of the Tennessee State Medical Association." It was also pointed out that since the State Association issued the Charters to the County Medical Societies for their existance, that such active membership in the county medical society would be mandatory for active membership in the TSMA.

XXII. A request was made to appoint a Committee for the American Medical Education Foundation. The Board authorized the President to appoint such a Committee to be composed of one doctor from each councilor district of the State. The President will appoint the committee.

XXIII. Appointments to all committees of the Tennessee State Medical Association were made and authorized by the Board of Trustees.

XXIV. Dr. Kampmeier presented to the Board a request from one of the Specialty groups to present part of the scientific program at the next annual meeting of the Association. Following discussion, Dr. Trabue made a motion which was seconded by Dr. Turner to the effect that the Board go on record as disapproving any part of the scientific meeting being presented by any special group, but that the scientific program should be left entirely to the Committee on Scientific Work since it is the function of that Committee to produce the scientific program at the annual meeting. This motion was adopted.

There being no further business, the meeting adjourned at 1:30 p.m.

J. E. Ballentine
Executive Secretary

Symposium on the Diagnostic Value of Simultaneous Catheterization of the Aorta and the Right and Left Side of the Heart. Burchell, H. B.; Wood, E. H.; Sutterer, W.; Swan, H. J. C.; Helmholz, H. F.; Crowley, W. P.; Parkin, T. W.; Wright, J. L.; Toscano-Barboza, E.; Brandenberg, R. O.; Fox, I. J.; Wakai, C. S.; Connolly, D. C.; Keys, J. R.; Kirklin, J. W.; and Ellis, F. H.: Proc. Staff Meet., Mayo Clin. 31:105, 1956.

The great advances in cardiac surgery which have occurred during the past 10 years have gone hand in hand with a continuous improvement in diagnostic methods. These methods have originated primarily in laboratories devoted to cardiopulmonary physiology and the information obtained has been combined with that derived from the more conventional technics of the X-ray, electrocardiographic and clinical laboratories. The total laboratory data thus obtained, in the case of the patient being prepared for cardiac surgery, must be integrated with the history and the findings on physical examination. This over-all evaluation is usually the responsibility of a team of physicians from the specialties of cardiology, physiology and surgery. After a decision has been reached regarding the indications for or against cardiac surgery, recommendations are then discussed with the patient's personal physician.

It has been but a few years since we became accustomed to right heart catheterization as a common diagnostic procedure in patients considered potentially suitable for intracardiac surgery. Now we are seeing the development of left-heart catheterization as a further and important diagnostic refinement. In brief, the method is as follows: The patient is prepared with sedatives and a local anesthetic. After suitable landmarks are determined by fluoroscopy, a long, thin-walled 18 gauge needle is introduced into the thorax from the back and advanced until it enters the left atrium. A catheter is passed through the needle and later advanced into the left ventricle. Blood samples and pressure recordings are taken from the left atrium and ventricle. From these one learns the pressure gradient between the left atrium and ventricle and is able in the case of mitral stenosis to evaluate, much more accurately, the degree of block at the mitral valve. When the data obtained from the left ventricle is combined with that obtained from catheterization of the aorta by way of the femoral artery, one may also determine the gradient across the aortic valve.

The symposium which is the subject of this review represents the work of a large team of experts. It consists of seven sections covering the following subjects: (1) The selection of patients for catheterization of the left side of the heart. (2) The technic and special instrumentation problems associated with catheterization of the left side of the heart. (3) Experience with and sequelae of catheterization of the left side of the heart. (4) Left ventricular and aortic pressure pulses in aortic valvular disease. (5) Left atrial and ventricular pressure pulses in mitral valvular disease. (6) Dye-dilution curves from systemic arteries and left atrium of patients with valvular heart disease; and (7) Surgical implications of catheterization of the left side of the heart. To quote from the first paper by Dr. Howard B. Burchell: "One basic goal of left-heart catheterization is the proper selection of patients for surgical treatment."

The papers in this group discuss the technics involved in, as well as the indications for and risks of, left-heart catheterization. The articles are clearly written, readable and even exciting. The entire symposium is highly recommended and should be of great interest to any physician responsible for patients in whom cardiac surgery is a consideration. (Abstracted for the Middle Tennessee Heart Association by Richard France, M.D., Nashville.)

STAFF CONFERENCE

Vanderbilt University Hospital*
Congenital Hypertrophic Pyloric Stenosis

DR. BARTON McSWAIN: Today we shall discuss Congenital Hypertrophic Pyloric Stenosis. I believe that this is the first time any material on this subject has come from this institution since 1931. Dr. Barney Brooks discussed this subject in the JOURNAL of the Tennessee State Medical Association in February, 1931. At that time he reported only 10 such patients. Dr. Batson, how many patients have we now had since Vanderbilt University began to function in the buildings it presently occupies?

DR. RANDOLPH BATSON: We have had 149 patients with congenital hypertrophic pyloric stenosis.

DR. McSWAIN: Dr. Batson, would you please discuss the relative frequency of this disease?

DR. BATSON: Pyloric stenosis is a unique disease in one respect particularly. It is seen only during a brief period of early infancy usually between 2 and 12 weeks of age and rarely occurs during early neonatal life. After the first few months of life hypertrophic pyloric stenosis is not recognized, even in mild form. The symptoms of the disease usually appear in the second, third or fourth weeks of life, reaching serious proportions during the fifth, sixth and seventh weeks. It is at this time that increased peristalsis, projectile vomiting and the appearance of a palpable pyloric tumor leads one to the correct diagnosis. There are few diseases in this age group that show such a definite predilection for the male infant. Most series of reported cases show that this selectivity occurs in a ration of 4 or 5 males to every 1 female. There is little doubt but in many instances the disease is familial. There are numerous reported cases in siblings, especially twins, and many observations which show that pyloric stenosis may be a prominent difficulty through several generations of a family. In most reported series approximately one-half of the cases are in the first born child. It is also said that children affected with this disease have a birth weight greater than the average new-born. In spite of early speculation to the contrary, it seems that the disease is probably equally prominent in all races.

DR. McSWAIN: Dr. Batson, have we ever had the manifestations of this disease occur immediately after birth?

DR. BATSON: Yes, we have had two patients in whom the vomiting began immediately after birth.

DR. McSWAIN: Dr. Batson, would you discuss the cause of congenital hypertrophic stenosis?

DR. BATSON: When one considers these factors, it is apparent that the etiology of pyloric stenosis remains obscure. Time does not permit a discussion of the various hypothetical premises. Walgren[1] in 1946 did make a significant observation following an experimental study which showed that during the first week of life there was no radiological evidence of neonatal pyloric obstruction in those patients who subsequently developed the disease. Using the predetermined figure that one in every 150 males develop pyloric stenosis, he studied 1,000 males roentgenographically during the early neonatal period, expecting that 6 or 7 of these patients would have the disease. Actually, 5 infants developed hypertrophic pyloric stenosis within 2 to 3 weeks and in none of the five cases was he able to demonstrate roentgenographic changes during the first week of life. Thus, it seems that the demonstrable degrees of pyloric obstruction are not present at birth in this disease. It is open to question whether or not the presently used descriptive term should include the word "congenital" since the post-natal origin of the lesion is fairly well established.

There are few diseases that we so enthusiastically attack from the standpoint of surgical correction. With good preoperative preparation the mortality is negligible, the complications are rare and the results are excellent. For the sake of completeness, however, one should point out that this method of treatment is not universal. Europeans are apparently very successful in the medical management of these patients.

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This involves the use of thickened feedings and drugs such as atropine, atropine derivatives and phenobarbital. Their reported results are comparable to ours.

In regard to the palpability or non-palpability of pyloric tumors, I think that one should be able to feel the mass in an overwhelming majority of these cases. Dr. Amos Christie, head of our Department of Pediatrics, has frequently stated that, when hypertrophic pyloric stenosis is suspected, an adequate examination necessitates abdominal palpation under ideal conditions for a minimum of 20 minutes or until the tumor is felt.

DR. McSWAIN: Dr. Woodruff, will you please discuss the disorders of the chemistry in this disease and describe the methods used for their correction?

DR. CALVIN W. WOODRUFF: Infants who have been vomiting because of pyloric stenosis are dehydrated, quite often to the extent of 10 to 15 per cent of their body weight. In addition to their loss of fluid directly by vomiting, normal losses of water through the lungs, skin and kidneys continue without adequate replacement. The vomitus consists entirely of gastric juices and recently ingested food. The presence of hydrochloric acid in the stomach leads to a loss of chloride in greater quantity than other salts. Smaller but significant amounts of sodium and potassium are also lost in the vomitus.

These changes are reflected in the blood analyses for chlorides, which are usually reduced to a figure as low as 80 milliequivalents per liter, with a corresponding increase in the serum carbon dioxide content, usually greater than 35 milliequivalents per liter (83 volumes per cent). Hemoconcentration is reflected in an increased hemoglobin concentration and hematocrit which falls following adequate fluid administration. When the dehydration is severe, an elevation of nonprotein nitrogen in the blood, due to embarrassment of renal blood flow, may occur. For evaluation of preoperative fluid therapy, a record of changes in body weight, hemoglobin concentration and serum chloride and bicarbonate concentrations are adequate guides. A moderately severe potassium deficit may occur with normal serum potassium concentrations and such measurements are not necessary for adequate management.

Initial therapy in infants with pyloric stenosis who are severely dehydrated should be begun with the intravenous administration of equal parts of normal saline and 5 per cent glucose solutions in amounts of 10 to 15 cc. per pound of body weight given rather rapidly to restore circulatory volume and renal function to normal. Whole blood should be given to infants in shock or to correct anemia. Further treatment should consist of about 60 to 75 cc. per pound per 24 hours of intravenous or subcutaneous fluids of which no more than half should consist of normal saline, since the dehydration is usually greater than the loss of salts. Five per cent glucose is the most appropriate solution for the administration of water. After kidney function becomes adequate, as manifested by normal urinary output, the addition of 2 milliequivalents of potassium (usually 1 cc. of a concentrated solution of potassium chloride) to each 100 cc. of fluid administered will supply adequate amounts of this salt to meet immediate needs. In less severe instances of dehydration the administration of fluids by hypodermoclysis may suffice. It should be remembered that 5 per cent glucose in water should not be given subcutaneously without the addition of enough saline to compose at least one-third of the fluid administered.

A preoperative regimen of fluid therapy such as that outlined above will usually correct the dehydration and electrolyte depletion of infants with pyloric stenosis within 48 hours. The amount of fluid administered should be governed by clinical observation. The determination of the carbon dioxide content after 24 hours of therapy will also be helpful. Surgical correction should not be unduly delayed by waiting for biochemical confirmation of the success of therapy when this is clinically manifest. When milk feedings are begun shortly after operation it is usually possible to meet the postoperative fluid and electrolyte needs by this route.

DR. McSWAIN: Dr. Holcomb, would you discuss the differential diagnosis?

DR. GEORGE W. HOLCOMB, JR.: Yes, but please let me say something about the symptoms first.

Projectile vomiting without bile is the most characteristic symptom of hyperthrophic pyloric stenosis. This seldom has its onset before the first week of life or after the tenth week. At first the vomiting may be infrequent but within a week or two it follows most of the feedings. In some instances the baby may vomit only 3 or 4 times a day but the vomitus will contain most of the milk that has been ingested for several feedings.

The diagnosis can be made in most instances by obtaining an accurate history and performing a careful physical examination. Chalasia (relaxed esophagogastric junction), intracranial disease, pylorospasm, elevated NPN and a poor feeding regime should be differentiated from hypertrophic stenosis.

Chalasia can be differentiated by the fact that vomiting is not projectile but seems to run out of the baby's mouth when he is returned to his crib. The vomitus does not contain bile and for this reason the picture may easily be confused with that of pyloric stenosis. Chalasia should be considered in the differential diagnosis so that an unnecessary laparotomy can be avoided. Barium swallow will establish the diagnosis of chalasia for which conservative treatment should be instituted. The formula can be thickened with cereal and the baby propped in an upright position for an hour after each feeding.

The absence of a bulging fontanelle, separation of the cranial sutures, convulsions or abnormal neurological findings will assist in eliminating intracranial disease as the cause for the vomiting.

Hypertrophic pyloric stenosis may resemble pylorospasm early in the disease. I recently saw a four weeks old male infant who is the second sibling of this family and whose sister had pyloric stenosis the year before, successfully treated with a pyloromyotomy. The gastrointestinal series showed that his pyloric canal was normal. He was treated with appropriate relaxing agents. The vomiting increased and a gastrointestinal series repeated one week later revealed a narrowed pyloric canal with gastric retention, indicating pyloric stenosis. A tumor was palpable at this time but had not been noted a week earlier. This is supportive evidence that hypertrophic pyloric stenosis is not of congenital origin for if it were, the pyloric stenosis would have been present at birth and certainly would have been noted at the time of the first X-ray examination when the baby was four weeks old.

Occasionally the formula is too concentrated or the baby is fed too much at one time. Adoption of a sensible formula and feeding schedule will eliminate this as a cause for the vomiting.

DR. McSWAIN: I believe that most incidences of this disease are first treated as feeding problems, the pediatrician or family doctor thinking that the breast milk or formula does not agree with the infant. However, the diagnosis of hypertrophic stenosis is being made much more promptly now than it was in previous years and if the symptoms do not subside promptly with change of formula, the practitioners are assuming that congenital hypertrophic pyloric stenosis exists and are referring them for proper therapy. One other thing with which the disease can be confused is duodenal atresia. However, duodenal atresia is always manifest immediately after birth and usually occurs distal to the ampulla of Vater and, because of that fact, there is practically always bile in the vomitus.

Dr. Holcomb, Dr. Batson briefly discussed the question of examination of the abdomen but we should appraciate it if you would enlarge upon his statements.

DR. HOLCOMB: Examination of the abdomen should be accomplished with the baby lying supine on a table and the examiner sitting comfortably and relaxed to the right of the baby. One should not attempt to palpate the tumor while standing beside a baby who is crying. A rigid abdomen will prevent palpation of the tumor. In order to avoid this, a nurse should feed the baby some water during the examination. The water also stimulates the pylorus to tighten up and allows easier palpation of the tumor. Peristaltic waves may be seen in the epigastrium, moving from left to right. As more water is ingested the baby usually will vomit and this is the most ideal time to palpate the tumor.

By placing the index or middle finger tip just lateral to the upper right rectus muscle

and by directing it medially, slightly upward and deeply, the tumor can be palpated beneath the rectus muscle. As the finger is moved back and forth, a smooth firm tumor will be found. The inferior pole of the right kidney should not be mistaken for the pylorus. Examination with a barium meal is not necessary if the pyloric tumor is palpated. By exercising patience and gentleness, one should be able to palpate the tumor in 90 per cent of the cases.

DR. McSWAIN: I think that Dr. Holcomb's remarks about the method of examination of babies apply to abdominal examination of infants in general as well as in regard to this lesion. One other time when one may successfully examine the infantile abdomen for a fleeting moment is when the child is asleep. Of course, he is completely relaxed then and in the few seconds before he awakes and begins to struggle, it may be possible to feel a mass.

Dr. Holcomb, would you continue the discussion of preoperative management?

DR. HOLCOMB: Once the diagnosis of hypertrophic pyloric stenosis is confirmed by X-ray studies or palpation of the tumor, all efforts should be directed toward preparing the patient for surgical relief of the obstruction. Fluids and electrolytes should be administered as outlined by Dr. Woodruff. About 14 hours prior to the operation it is wise to omit the baby's formula and give 2 or 3 ounces of 5 per cent dextrose in saline or water orally. This can be repeated every 3 hours and often the baby will not vomit the water, whereas, he had been vomiting all of his formula. Apparently the water passes the pyloric obstruction easier than milk curds. Also, some of it is absorbed directly from the stomach. This should be continued up to one hour before surgery. Not only can proper hydration be insured in most instances with this schedule, but the stomach will not be filled with milk curds when the infant arrives in the operating room. It is surprising to note the number of hours that curds will remain in a baby's stomach when the pyloric canal is narrowed. Also, it is well to remember the tremendous size which the stomach will reach when a partial obstruction exists at the pylorus. Failure to consider these facts and take appropriate steps to prevent postoperative aspiration of milk curds has resulted in fatal accidents during recovery from anesthesia. Certainly, placing these babies on the usual nothing-by-mouth regimen 6 hours prior to surgery is not sufficient precaution to insure the stomach will be empty at that time. Therefore, it is preferable to discontinue the formula 14 hours prior to surgery and continue feedings with dextrose in water or saline as indicated by the serum electrolyte studies. When the patient arrives in the operating room, a No. 10 or No. 12 French catheter can be inserted into the stomach and its contents aspirated. Since water is all that has been given in the immediate preoperative period, it can be aspirated easily. The catheter should be removed from the stomach prior to the administration of the anesthetic. If this is not done gastric fluids will regurgitate alongside the tube into the mouth during the operation. When the tube is removed the esophageal sphincter remains competent.

DR. McSWAIN: Dr. Holcomb, what kind of anesthesia and what kind of incision do you use?

DR. HOLCOMB: The anesthetic agent preferred is drop ether supplemented by oxygen piped in beneath the ether mask. A stethoscope should be taped over the baby's heart and the anesthesiologist should keep the earpieces on during most of the procedure. By doing this, cardiac arrest will be detected as soon as it occurs instead of several minutes later. Under these circumstances the operator can expose and massage the heart while there is hope of reestablishing cardiac contractions. Palpation of the superficial temporal pulse is inferior to this technique when dealing with infants. The extremities should be wrapped with sheet wadding to conserve body heat during anesthesia.

Three different incisions have been utilized to expose the pylorus in infants: (1) A gridiron incision lateral to the rectus muscle beneath the right costal margin. The muscle layers are split in the direction of their fibers and the peritoneum opened transversely. The incision is placed so that the liver lies beneath the peritoneal scar and prevents adhesions to its undersurface. The main advantage of this incision is that

it is quite strong and disruption seldom occurs. The disadvantage is the fact that the incision is lateral to the pylorus which usually lies beneath the rectus muscle nearer the midline. In those instances where the pylorus is not so mobile its delivery into the wound can be very difficult. The serosa of the stomach or duodenum may be torn while struggling to deliver the pylorus through this incision. Such traction on the stomach also has produced apnea. Should this occur, immediate release of the stomach will allow regular respirations to return. (2) A right upper paramedian incision about four centimeters in length can be made with the inferior pole one to two centimeters above the umbilical level. The rectus muscle is retracted laterally. Again, the incision is so placed that the liver lies beneath the peritoneal scar. Retraction of the liver upward allows the pylorus to be delivered into the wound with ease. Following pyloromyotomy the peritoneum is closed with continuous 4-0 chromic catgut, the anterior rectus fascia with 4-0 silk, and the superficial fascia with 4-0 interrupted plain catgut. The skin is approximated with interrupted 5-0 silk. (3) A midline incision at the same level as the paramedian incision can also be used to obtain excellent exposure. It is made with rapidity and closed with ease. We have used this incision in five instances now and excellent healing has occurred in each patient. One of these babies weighed only 5 pounds 10 ounces at six weeks of age, having lost considerable strength and weight from prolonged vomiting. The midline wound healed nicely in this debilitated baby. The advantages of easier exposure and shorter operating time offered by the midline and paramedian incisions make these more attractive than the gridiron incision. Wound dehiscence need not be feared if nonabsorbable suture material is used for the deep fascia layer.

DR. McSWAIN: If a competent anesthetist is not available, it may be less dangerous to do the operation under local than under general anesthesia. However, if local anesthesia is given, it may be difficult to immobilize the tumor satisfactorily for the few minutes necesary to carry the incision down to the mucosa and it certainly is very difficult to obtain an accurate closure of the abdominal wall. Without good relaxation, the thin peritoneum tears readily and dehiscence or hernia may occur. We have used general anesthesia for many years.

After the proper abdominal incision, as described by Dr. Holcomb, results in exposure of the pylorus, it can be held in the left hand of the operator betwen the thumb and the index finger. Since there is less blood supply there, the longitudinal incision should be made in the antero-superior aspect of the pylorus, not halfway, but three-fourths of the distance from the greater curvature side to the lesser curvature side. The so-called tumor is usually quite edematous and one should cut with the knife through the serosa only. After the serosa is incised, the remainder of the opening can and should be made with the handle of the knife. One should be certain that the knife handle has no sharp edges on it. By repeated incisions with the handle, exerting a fair amount of pressure, and by separation of the muscle by pushing it away from the center of the incision, a satisfactory opening can be made and the mucosa will pout up into the incision. The opening should be made from duodenum to normal gastric muscle. The muscle should not be spread by opening a hemostat and forcing it apart by the jaws of the clamp. The reason for the use of blunt maneuvers after incising the serosa is to prevent opening the mucosa, especially the duodenal mucosa. This is likely to occur if the knife blade or an open hemostat is used. If the duodenal or gastric mucosa is inadvertently opened, of course, closure cannot be done in the usual serosa-to-serosa approximation. It can be closed fairly satisfactorily, however. It is extremely important, if it is opened, to recognize that fact and to close it. One can fill the incision with saline solution, exert pressure upon the stomach and duodenum and see a bubble of gas if the mucosa has been opened. If closure is not done, leakage from the perforation will, in all likelihood, result in peritonitis and death of the baby. Often, there is no bleeding whatever. If there is, one finds that it is very difficult to clamp and tie a vessel in the edematous tissue. First, an attempt should be made to control the bleeding by pressure for about 60 seconds. If this attempt is not successful, it is best to control it with a suture without clamping, using fine suture material, swaged on

a small caliber needle. It would be desirable to place a tag of omentum over the mucosa, if it had been opened, but usually the omentum is too short to reach the pyloric region.

Dr. Holcomb, do you have any comments about postoperative care?

DR. HOLCOMB: The patient should be placed on his side with a sandbag at his back or on his abdomen at the conclusion of the operation. This precaution is necessary to prevent aspiration of vomitus. Again, it is worth emphasizing the fact that the stomach of a baby with pyloric stenosis is very large and if precautions are not taken, aspiration of vomitus and death may occur. The infant's position can be alternated from one side to his abdomen to the other side every two hours but he must be kept off his back. A hypodermoclysis of intravenous infusion should be given before the operation and another one afterwards, if the patient is dehydrated. Routine use of antibiotics is not necessary.

Oral feedings can be resumed 3 to 4 hours following the operation. The following schedule has proved successful:

1 Oz. 5 per cent glucose water every two hours—3 feedings
1 Oz. skim milk every two hours—6 feedings
1¼ Oz. skim milk and 10 per cent sugar every two hours—6 feedings
2 Oz. skim milk and 10 per cent sugar every two hours—12 feedings
3¾ Oz. skim milk and 10 per cent sugar every four hours—6 feedings

The feedings can be altered somewhat to fit each patient's need. If he is not satisfied and is not vomiting, some babies can be moved along faster than this. Others will require a longer time for the edema to subside around the pylorus and will have to be cut back for a short period.

DR. McSWAIN: Dr. Thomison, would you discuss the pathologic changes in congenital hypertrophic pyloric stenosis?

DR. JOHN BROWN THOMISON: Most people believe that the hypertrophy of the pyloric ring is present before birth and that this is responsible for narrowing of the pyloric lumen. In time, mechanical irritation caused by the passage of milk curds through the already narrowed lumen produces enough edema of the mucosa to cause obstruction. This usually takes 1 to 3 weeks.

The lesion consists of hypertrophy of the circular layer of muscle and, to a lesser degree, of the longitudinal muscle in the wall of the pyloric sphincter. The pylorus is increased in length and in width and the cut section has a grayish, gristly appearance. At the gastric end, the thickened muscle tapers gradually but, distally, it ends abruptly. Microscopically, one sees increase in size of the smooth muscle cells sometimes with associated edema. The mucosa is edematous, often quite markedly so, and there is usually a moderate infiltration by inflammatory cells, although such an infiltration is usually difficult to evaluate.

The etiology is unknown. Some have regarded it as the end-stage of pylorospasm on the assumption that long continued spasm leads to strain hypertrophy, but no abnormality of nerve supply has ever been demonstrated. Equally obscure is its increased incidence in males, particularly in first-born males.

DR. McSWAIN: Please note, Dr. Batson and Dr. Holcomb, that Dr. Thomison said that the muscular hypertrophy is present before birth but that the manifestations of obstruction do not appear until edema occurs.

Dr. Batson, how many infants with this disease have we lost after operation?

DR. BATSON: Four babies died after operation. One in 1928, one in 1941, and two in 1945. Thus, we have had no postoperative deaths in the past 10 years.

DR. McSWAIN: Are there any other comments?

There are many factors which have led to the improvement in the results in the treatment of this lesion. The improvement in the operative technique itself, the improvement in pre- and postoperative management and the improvement in anesthesia have all been contributory but I believe that the main factor is an improvement in the diagnostic acumen of the pediatricians and general practitioners who make this diagnosis early and send the babies in to the hospital while they are still in good condition.

Biography

1. Walgren, A.: Preclinical Stage of Infantile Hypertrophic Pyloric Stenosis, Am. Jr. Dis. of Child. 72:371, 1946.

The President's Page



Dr. Wood

I presume it safe to say that no individual has yet been placed in a position that carried with it potential responsibilities, that at some time he did not stop and say: "What am I to do?" That as he looked at his problem from various angles, it assumed larger and larger proportions and as the problems grew, the capabilities and the requisites for mastery seems to diminish accordingly.

Having known personally each of the last 36 presidents of our State Association and witnessed the apparent ease and grace with which they performed lends little peace of mind, and to follow one whose broad interests and vigorous pursuit has set a pace such as that of Charles Trabue IV, is to say the least somewhat disconcerting.

My friends know I am grateful for this signal honor, they also know I would like to render an appreciative service during the coming year. There may be but little that I can do but the desire will still be present. In the next several issues of this page, I will try and point out a few of our problems as I see them and have heard them discussed on both local and national levels. I do not expect to solve them—in fact many may not agree with what may seem to be an "unrevised version." There must be few of us who now feel we can afford to be complacent in regard to Association activities, but it has taken many years to develop the manpower for the huge number of committees of the State Association. In too many instances the work has fallen on too few shoulders. Such restricted manpower has led to concentration, which in turn has led to unfortunate opinions of monopolistic tendencies, forgetting that those needing help tend to ask those who are ever ready to cooperate in the Association activities. We hold to the dictum that the most successful avenue of approach in disrupting monopolies is to join them by offering one's services. Let me urge each physician to offer his mite in some departmental activity.

During the year, we will try and outline some of the work of various groups, all closely allied to medical practice, where help is needed from both the medical groups, the medical auxiliary and the lay public. In this latter group lies a rich supply of material for agency workers and such outlets for neurotic tendencies will be far less harmful than many of the presently prescribed therapeutic agents.

Again, I thank those responsible for my being thought capable of assuming the presidency for this year. I trust they will not be disappointed.

R P Blood M.D.

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MAY, 1956

EDITORIAL

NEUROTICS IN PRACTICE

"The recognition of the importance of emotional stress in the genesis of certain disorders has been a fruitful concept so far as it has promoted the treatment of the patients as a whole."[1] With these words Allen S. Johnson introduces his thoughts and observations regarding the changing patterns of medical practice. He recognizes the disadvantage of such a concept since this attitude may stifle scientific investigation of disease mechanisms either as the result of attributing etiologic responsibility to the emotional accompaniment of any serious disorder or as the result of assuming that clinical entities of unknown etiology must be psychogenic in origin. The author doing a family type of practice decided to compare his patients' illnesses of 1955 and of twenty years earlier. He questioned the validity of such claims as "emotionally induced illness comprises the bulk of medical practice," or "the psychoneuroses constitute the bulk of every general medical practice. By conservative estimate 60 per cent of all the patients who go to private physicians suffer, not from organic disease, but from psychoneurotic conditions."

He studied 575 consecutive patient visits spanning the four seasons in 1935 and a similar group of 1,332 cases in 1955. Except for a tendency to have more older persons in the 1955 series, the groups were almost identical. He found that disorders of the respiratory tract were most frequent and accounted for about one-quarter of the patients in both series. This was to be expected since the author is from New England. A surprising finding was that despite the increased age in the 1955 series, the increasing furor regarding cardiovascular disease, and the increased prominence of those afflicted during the past few months, the frequency of disease of the cardiovascular system was no greater than twenty years earlier. There was evidence of greater health consciousness in recent years as shown by the number of patients seen for routine examinations and immunizations.

Johnson divided his cases of organic disease into four groups. These were,—infections; physical and chemical agents including trauma and allergy; disorders of metabolism including diabetes, gout, avitaminosis, anemia and degenerative diseases; and neoplastic diseases. This strict classification excluded arthritis, bursitis, peptic ulcer, fecal impaction, endocrine disorders, etc., from the group of organic diseases. In spite of this rigid classification, he found that 62 per cent of the patients in his 1935 series and 51 per cent in his 1955 series had organic disease. However, when these figures were corrected by deleting those healthy patients who presented themselves for routine examinations or immunizations, it was found that 59 per cent of the 1935 group and 58 per cent of the 1955 group had organic disease according to his strict criteria. For all practical purposes these figures are identical and show no change in the two decade span. Of interest was the finding

[1]Johnson, Allen S.: Changing Patterns of Medical Practice, New England J. Med. 254:648, 1956.

that the digestive and nervous systems bore the brunt of stress in 1955 as they did twenty years ago.

The most interesting study fails to substantiate the claim that emotionally engendered illness is increasing at an alarming rate or that it now constitutes more than 50 per cent of medical practice. Although the treatment of psychoneurosis is most important, let no young man beginning general practice feel that neurotic "medical tourists" will outnumber his patients with organic illness.

A. B. S.

PERSONAL NEWS

Dr. I. E. Phillips, Bristol, presented a paper before the semiannual meeting of the Southwestern Virginia Medical Society. Title of the paper was "Current Concepts of Tinea Capitis."

Dr. Charles Doyle Couser, a native of Tullahoma, has announced the opening of his office for the practice of medicine in Cowan.

Four Memphis physicians recently conducted a medical forum before the Memphis Rotary Club. **Dr. Ernest G. Kelly** served as moderator and other physicians participating were **Dr. Samuel L. Raines, Dr. J. Spencer Speed** and **Dr. William M. Adams.**

Dr. F. S. Harper, Ashland City, has announced his retirement from the practice of medicine.

Dr. Robert E. Merrill, Tullahoma, is the new chief of staff at Coffee County General Hospital, Manchester. Other staff officers are **Dr. Clarence A. Farrar,** Manchester, and **Dr. Bruce Galbraith,** Tullahoma.

Dr. Vernon Knight, Nashville, was the principal speaker recently before the Jackson Little Club and the Madison County Tuberculosis Association at Jackson.

Dr. D. A. Greer, Sewanee, has been designated as the earliest known living matriculant of the Medical Department of the University of the South.

Among Oak Ridge physicians appearing on a program before the Adult Education Program at Oak Ridge High School were **Dr. T. A. Lincoln, Dr. W. W. Pugh**, and **Dr. Dan Thomas.**

Dr. Charles C. King, Memphis, has received the American Cancer Society's award for outstanding cancer control work in Tennessee. The award was presented by **Dr. R. R. Braund,** Memphis, President of the Tennessee Division of the American Cancer Society.

Dr. Stewart Lewis Nunn has announced that he will open a clinic for the practice of medicine and surgery in Ripley.

Dr. J. R. Bowman, Johnson City, recently spoke before the Jonesboro Elementary P.T.A.

Dr. Bruce Sisler, Gatlinburg, has been named Rotary Club district governor of East Tennessee.

Dr. J. F. Adams, Woodbury, is readying his new offices for the practice of medicine in Woodbury.

Dr. Nat Sugarman, Kingston, has been elected Chairman of the Roane County Chapter of the National Foundation for Infantile Paralysis.

Dr. R. A. Broady, Sevierville, was a recent speaker before the Sevierville Rotary Club.

Dr. James E. Wilson, Memphis, is the new president of the medical staff of the Memphis Eye, Ear, Nose and Throat Hospital. He succeeds **Dr. H. W. Qualls. Dr. Joseph Buchignani** was elected vice-president and **Dr. Fred C. Wallace** was re-elected secretary.

Dr. Autry C. Emmert and **Dr. Arthur W. Walker** were recipients recently of a feature newspaper article on the Waverly-McEwen Clinic.

Dr. Benjamin F. Huntley, Bristol, has been certified as a specialist in internal medicine by the American Board of Internal Medicine.

Dr. Guy M. Francis, Chattanooga, was a recent speaker before the Chattanooga Junior Chamber of Commerce. **Dr. Joseph W. Graves**, Chattanooga, presided over the meeting. Other participants were **Dr. Arthur J. Von Werssowetz** and **Dr. E. Wayne Gilley.**

Dr. Zelma L. Herndon, Knoxville, has opened her office, limiting practice to neuropsychiatry.

Dr. Herbert G. Giddens, Paris, has taken over the Priest Clinic in Huntingdon.

Dr. B. F. Gates, Cleveland, is the oldest living physician in Bradley County and Cleveland.

Dr. George E. Murray, Maryville, is practicing urology in Maryville.

Dr. Haskell B. McCollum, Greeneville, and **Dr. B. I. Inglehart,** Clarksville, have enrolled for a postgraduate training program at the University of Tennessee College of Medicine in Memphis.

Dr. Ralph H. Monger, Knoxville, has been re-elected President of the Tennessee Medical Foundation. **Dr. W. N. Cook,** Columbia, has been named vice-president and **Dr. D. W. Smith**, Nashville, re-elected Secretary-Treasurer. Dr. Cook is also a new Director and **Dr. Julian K. Welch, Jr.,** Brownsville, is a member of the Board of Directors.

Dr. Herbert Duncan, Nashville, is the new president of the Tennessee Academy of Ophthalmology and Otolaryngology. **Dr. J. Thomas Bryan,** Nashville, was re-elected Secretary-Treasurer.

Officers of the Tennessee Pediatric Society are **Dr. T. Fort Bridges,** Nashville, President; **Dr. William Crook,** Jackson, Vice-President; and **Dr. Stewart Smith**, Chattanooga, Secretary-Treasurer.

Dr. David Waterman, Knoxville, has been elected President of the Tennessee Chapter of The American College of Surgeons.

Dr. Julian K. Welch, Jr., Brownsville, has been named President-Elect of the Tennessee Academy of General Practice. **Dr. Spencer Bell**, Knoxville, assumed office as President. **Dr. John P. Lindsay,** Nashville, is the Secretary-Treasurer.

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The frequency of this condition makes it doubly important that it be recognized for early treatment in the hopes of attaining a cure.

CHRONIC POSTERIOR URETHRITIS IN THE FEMALE*

JOHN M. TUDOR, M.D., Nashville, Tenn.

Chronic posterior urethritis in the female is the most common and most exasperating condition, both to the patient and physician, encountered in urologic practice. It occurs in females of all ages, literally from the cradle to the grave. Analysis of 500 consecutive new female patients in our practice reveal that 387 or 77.4 per cent were suffering from chronic posterior urethritis. All of these patients received complete urologic investigation including urine cultures, pyelograms and cystoscopy. The remaining 22.6 per cent had other urologic conditions. The age of these patients ranged from 9 months to 71 years but the major portion, 296 or 76.4 per cent, were between 25 and 55 years of age. This correlates closely with the experience of O'Brien.[1]

Analysis of 500 cases of chronic posterior urethritis which have been seen in the period from January, 1953, to January, 1954, will be presented. Since approximately three-fourths of our female practice is composed of chronic urethritis, this study was carried out in the attempt to discover the presence or absence of any common denominator in this entity.

Etiology

The etiology and pathologic changes which occur in the female urethra incident to the production of this condition have been thoroughly explored by Folsom,[2] O'Brien,[1] Everett[3] and others.

The location and structure of the female urethra is such that contamination from the outside due to vaginal secretions, feces or foreign material is very likely to occur. The lymphatic proximity to the vagina, cervix and base of the bladder is also evident. Thus, the process begins as a simple infection from one of these sources, and due to the presence of periurethral and Skene's glands in both the anterior and posterior female urethra a chronic infectious focus in these glands is created which may persist over long periods of time. The initial cause is therefore infection. Following the onset of the initial infection certain pathologic changes occur. Stricture was encountered in 66 per cent of our cases, granulations in the posterior urethra, inflammatory polyps or cysts and exudates over the trigone are also seen. Frank cystitis with pyuria is seen in about one-fifth of these patients.

Trauma incident to childbirth and sexual intercourse is undoubtedly an aggravating, if not a causative factor in urethritis since the disease is far more frequent during the age range of sexual and reproductive activities. Many of these patients have their first bout of urethritis shortly following marriage or their first or subsequent labors. Likewise, many of them have urethral pain during or following intercourse.

Table 1

Cystoscopic Findings in 500 Patients with Chronic Urethritis

	Number of Patients	*Per Cent*
Stricture (less than 26 F)	331	66
Granulations	404	81
Polyps	169	34
Generalized cystitis	103	21
Trabeculation	26	5
Trigonal exudate	37	7

Diagnosis

The symptoms have been classified very aptly by O'Brien[1] and fall definitely into

*Read before the meeting of the Tennessee State Medical Association, April 10, 1956, Memphis, Tenn.

three categories,—urinary symptoms, referred pain and nervousness.

Table 2

Incidence of Symptoms

	Number of Patients	*Per Cent*
Bladder irritation	462	92
Referred pain		
Suprapubic	197	33
Low back	131	26
Groins	39	8
Legs	47	9
Legs	47	9
Renal and ureteral	96	19
Nervousness	223	44
Dyspareunia	60	12

The urinary symptoms are the most common. Frequency, urgency, pain on urination, nocturia, and sensation of incomplete emptying are the most prevalent. Referred pain occurs well over 50 per cent of the time. Suprapubic pain, low back pain, leg pain and pain in one or both inguinal areas also occurs. About 19 per cent of our patients had flank and/or lumbar pain identical with renal pain and occasionally severe enough to be interpreted as kidney colic. Abdominal and pelvic pain often accompanies urethritis. Misdiagnoses are common and many of these patients have had pelvic, abdominal or urologic operation directed at relief of the symptoms caused by chronic urethritis.

Table 3

Previous Operations Directed at Relief of Chronic Urethritis

Type of Surgery	*Number of Patients*	*Per Cent*
Pelvic	97	19
Abdominal	11	2
Urinary tract (other than urethral fulguration)	25	5

Nervousness, it seems, is almost universal in these patients; 223 or 44 per cent of our patients complained of varying degrees of nervous irritability. The question of which comes first, the nervousness or the urethritis is frequently raised. I believe the urethritis and the symptoms associated with urethritis are the cause of nervous irritability in the majority of these individuals.

The duration of the patient's difficulties before consulting a urologist varies. The largest group, 207 or 41 per cent of our series, had had difficulties for one or more years before they were either referred or came to us of their own accord.

Table 4

Duration of Symptoms

Duration	*Number of Patients*	*Per Cent*
Less than one month	32	6
One to three months	89	18
Three to six months	83	17
Six to twelve months	89	18
One or more years	207	41

Examination of the urine is highly misleading in the diagnosis of urethritis. Fifty-seven per cent of this series had negative urines and only 15 per cent had heavy pyuria. This phenomenon often leads to the assumption on the part of many physicians that the patient has a nervous bladder and urologic investigation and definitive treatment is deferred.

Table 5

Microscopic Examination of the Urine (centrifuged)

Urine Findings	*Number of Patients*	*Per Cent*
Negative	287	57
Pyuria	213	43
1 plus	101	20
2-3 plus	35	7
4 plus	77	15

Urine cultures were obtained on all but 33 patients in this group and 53 per cent or 265 of these were sterile. Of the remaining positive cultures, the most common was *E. coli* followed by staphylococcus and a small number of other organisms.

Table 6

Urine Cultures

Results	*Number of Patients*	*Per Cent*
Negative	265	53
Positive	192	38
E. coli	106	21
Staphylococcus	60	12
Other	26	5
No culture	33	

Evaluation of the upper urinary tract is extremely important and should be carried out unless there is some contraindication. In this series pyelograms were practically routine and 410 or 82 per cent had normal upper urinary tracts. Forty-two patients or 8 per cent had abnormal pyelograms and 48 were not examined.

Table 7

Evaluation of the Upper Urinary Tract

Pyelograms	*Number of Patients*	*Per Cent*
Normal	410	82
Abnormal	42	8
Pyelonephritis	28	5
Hydronephrosis	11	2
Stone	3	
Not examined	48	

The diagnosis of urethritis is made by the history, and clinched by complete urologic investigation. All of these patients should have cultures, X-ray examination of the upper urinary tract, and cystoscopy. Calibration of the urethra is routine with us and the normal female urethra should accept a 26 Fr. bougie comfortably. Cystoscopy will reveal the typical granular appearing urethra, inflammatory polyps at the neck of the bladder and possibly exudates over the trigone.

Pelvic examination should never be omitted, and special attention should be given to cervicitis, since it accompanies or is a focus for chronic urethritis in many instances.

Treatment

Treatment of chronic urethritis hinges on two considerations,—first, correcting the stricture, and second, destroying the diseased tissue in the urethra and around the bladder neck. Treatment of urethritis is not universally satisfactory. However, the majority of the cases are relieved of the distressing symptoms. The most effective treatment consists of the following measures:

1. Local treatment
2. Antibiotic and chemotherapy
3. Symptomatic treatment
4. Diet
5. Eradication of foci of infection
6. Electrofulguration of the urethra and bladder neck

Local treatment of the urethra and bladder neck is imperative in bringing relief to these patients. No amount of chemotherapy will solve the problem unless dilatation of the urethra is carried out concurrently. After calibration of the urethra, gradual dilatation with steel sounds to 30 Fr. is done at frequent intervals. Following dilatation, instillation of Argyrol, silver nitrate or more recently Furacin solution and Furacin urethral suppository is indicated. Furacin solution and Furacin suppositories have proved very efficacious in many of these patients. The treatment should be carried out at weekly intervals at the outset and later at longer intervals of 2, 4 and 6 weeks, depending on the patients response. These patients are not dismissed until they have been symptom free for three months, and following this are advised to have a urethral dilatation every 3 to 6 months for another 12 months. Persistence and patience are great virtues in dealing with chronic urethritis.

Table 8

Summary of Treatment Used

Type of Treatment	*Number of Patients*	*Per Cent*
Urethral dilatation	483	96
Bladder instillations		
Furacin	210	42
Argyrol	184	36
Silver nitrate	89	19
Electrofulguration	21	5
Cures	4	
Improved	11	
Failures	6	
Others	41	8

Antibiotic and chemotherapy is valuable but no amount of chemotherapy will relieve these patients unless local treatment is carried out concurrently. In the absence of acute infection or heavy pyuria, I usually start them out on Gantrisin or one of the other sulfonamides, 1 Gm. four times daily. After ten days it is decreased to 0.5 Gm. three times a day for another 10 to 14 days. Following this a system of periodic medication is followed. This consists of 0.5 Gm. of Gantrisin 3 times a day at intervals of 4 days, a week, or possibly every other week for 2 to 3 additional weeks, depending on how the patient responds. One of the milder urinary antiseptics such as Mandelamine or Urotropin is used following cessation of the sulfonamide therapy. In the average case medication will continue for 6 to 8 weeks. White blood counts should be made at intervals while the patient is on prolonged sulfa therapy. When the process is acute with heavy pyuria, one of the wide spectrum antibiotics is indicated in doses of 250 mg. every 6 hours for 4 to 5 days, and then going on to the grad-

uated sulfonamide routine as outlined above. Urine cultures and sensitivity studies will influence the choice of drug to some extent when available.

Penicillin and penicillin-like drugs, in my opinion, are of little value. The most useful drugs of all are the newer sulfonamide preparations, such as Gantrisin, Elkosin and Thiosulfil.

Symptomatic treatment consists primarily of bladder sedatives and these are very useful. There are several good ones, all of which contain the belladonna alkaloids and a mild sedative such as phenobarbital. When symptoms are very distressing, triple tinctures, that is,—equal parts of tincture of belladonna, tincture of opium and tincture of hyoscyamus in doses of 20 drops three times a day, or every four hours as necessary, will often provide dramatic relief. In very tense individuals it is desirable to use stronger opiates as the situation requires until the acute phase is over. Hot sitz baths are used one time daily and whenever necessary for the relief of pain and they also prove very helpful.

Diet plays some part in bladder irritation. Coffee, Coca-Colas, soft drinks and alcohol are to be avoided. Highly seasoned foods, condiments, black pepper and vinegar are restricted as well.

Electrocoagulation is and has been used by many urologists to destroy the diseased tissue in the posterior urethra and bladder neck. Briefly, this consists of resecting and lightly fulgurating the inflammatory polyps and granulations of the urethra and bladder neck and the exudate over the trigone if present. In my opinion, fulguration of the bladder neck should be reserved for patients who do not respond to all the other measures in a reasonable length of time. Reluctance to carry out fulguration in these patients is great because the ultimate results are not spectacular and the recovery from this is frequently prolonged and traumatic to the patient and surgeon alike. The complications are rarely serious or major but are very troublesome in view of the uncertainty of an ultimate cure.

Foci of infection apparently play some part. When cultures are positive one must consider the foci from which they came. *E. coli* and the coliform group are from the bowel or from outside contamination. Staphylococcus and streptococcus may be from the cervix, teeth, sinuses and possibly the respiratory tract. Chronic cervicitis is a frequent offender and deserves careful attention.

As pointed out above the treatment will frequently need to be carried out over a long period of time. In this series, 188 patients, or 38 per cent, are still under treatment well over a year after their first visit.

Table 9

Duration of Treatment

Time	*Number of Patients*	*Per Cent*
0-3 months	71	14
3-6 months	93	18
6-9 months	65	13
9-12 months	83	17
Still under treatment	188	38

One word of caution. One should not treat any case of chronic bladder irritation or recurrent pyuria without the benefit of complete urologic investigation. The physician must be certain there is no more serious condition present, such as carcinoma of the bladder or upper urinary tract before undertaking the treatment of such a chronic situation.

Table 10

Results of Treatment

	Number of Patients	*Per Cent*
Cured	105	21
Improved	242	48
Unimproved	96	19
No follow-up	57	12

I have presented, perhaps, a discouraging picture of chronic posterior urethritis. Fortunately, the majority of these patients do respond in some measure, at least, to treatment. In this series 105 patients or 21 per cent can be classified as cures, at least for the present; 242 or 48 per cent were improved; 96 or 19 per cent were unimproved; 57 were lost to follow-up. It is the 19 per cent who do not respond to treatment who create the impression that female bladder trouble is an incurable entity. The practicing physician develops a backlog of these chronically ill who are seen with most

discouraging regularity. The ones who respond quickly and well are soon forgotten.

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Discussion

DR. CHARLES C. STAUFFER (Jackson): Please let me express my appreciation to Dr. Tudor and the association for the opportunity to discuss this paper on a subject which constitutes an integral part of every urologist's daily practice. His careful analysis of 500 cases is sufficiently large to make it statistically significant.

Although he has limited his discussion to inflammatory disease of the urethra and bladder neck, it is my feeling that the bladder trigone is very frequently involved in the same process. Some writers refer to the symptom—complex as urethrotrigonitis, not attempting to separate them as two entities. This situation also usually is associated with some degree of urethral stenosis, which requires dilatation periodically as Dr. Tudor has emphasized. The stenosis can result in retention of some urine after voiding, which makes satisfactory treatment of an infection virtually impossible until after the bladder can be emptied satisfactorily. However, I believe it is a mistake to carry out any unnecessary instrumentation in a patient who has an acute infectious process, and consequently I prefer to treat the infected patient with one of the antibiotic or chemotherapeutic drugs for a few days prior to cystoscopy if nothing is to be lost by waiting.

It is my feeling that the abnormal cystoscopic picture of the trigone is frequently due to simple edema of the mucous membrane, as so many such patients have no pus on examination of a properly collected catheterized urine specimen. When trigonitis does co-exist, another symptom is added, namely, pain immediately after voiding. This is due to apposition of the dome of the bladder to the inflamed mucosa of the trigone, and lasts until enough urine has been excreted to separate the surfaces again.

Two additional methods of treatment might be mentioned. I quite agree that electrical fulguration is rarely indicated, but it is doubtless beneficial in some patients who will not respond to any other method. Before resorting to that, however, I prefer topical cauterization which is an office procedure. Although the bladder mucosa generally may be rather sensitive to strong solutions of silver preparations, the mucosa of the urethra and trigone are apparently less sensitive. Using an air endoscope, with the patient in the knee-chest position, the trigone and urethra can be adequately visualized and treated with silver nitrate solutions of a strength of 10 per cent or more. It is true that this is accompanied by considerable discomfort, but is usually controlled by mild sedation for a few hours.

Patients whose pathologic process is limited almost entirely to the urethra may respond to one other method of treatment. As the vesicle sphincter is proximal to the urethra, and as silver nitrate is quickly inactivated by the chloride in urine, it is difficult to see how this material could achieve much when instilled by catheter into the bladder as is frequently done in the treatment of urethritis. Consequently, I prefer instillation of the solution by means of a bulb syringe applied to the external meatus, so that its cauterizing effect will be maximal in the urethra where the inflammation is most acute.

Although I agree that the majority of these patients may not be cured, proper and periodic treatment as outlined by Dr. Tudor will usually result in alleviation of most symptoms and consequently in a grateful patient.

The author has outlined in a practical and clear manner the therapeutic approach to the arrhythmias.

THE MANAGEMENT OF CARDIAC ARRHYTHMIAS*

J. WARREN KYLE, M.D.,† Memphis, Tenn.

Correct diagnosis is the keystone of therapy, and in no group of disorders is this more true than in the cardiac arrhythmias. The history and physical examination will allow a high degree of accuracy in diagnosis, particularly if the physician has had experience in correlating clinical and electrocardiographic findings in a variety of these conditions. Although the electrocardiogram is the most accurate means of diagnosis, there are occasional complex arrhythmias extremely difficult to interpret electrocardiographically, but fortunately these are rare.

An important feature of the treatment of these disorders is the underlying condition of the heart. For example, ventricular premature beats in a normal heart mean something entirely different from those appearing after a myocardial infarction. A paroxysmal tachycardia is well tolerated by a normal heart, but it will frequently precipitate cardiac insufficiency or coronary insufficiency in a diseased heart.

The vigor and the risks of therapy should always be balanced against the actual or expected effects of the arrhythmia as estimated by the clinical picture, the type of arrhythmia, and the underlying condition of the heart.

Premature Beats

Premature beats (premature contractions, premature systoles, extrasystoles) occur commonly in normal individuals as well as in patients with heart disease. They may be atrial, nodal or ventricular in origin, but the great majority are ventricular.

The physician should avoid frightening the patient about this usually benign irregularity, and many patients need active reassurance since they are already alarmed by the palpitation.

In patients without heart disease, premature beats may be aggravated by nervous tension, fatigue, tobacco, alcohol and caffeine, and relief from these factors may be helpful. Mild sedation is frequently beneficial. When the premature beats are frequent and cause annoying palpitation and are not relieved by simple measures, quinidine sulfate 0.2 Gm. 3 or 4 times daily may be helpful.

After acute myocardial infarction, ventricular premature beats are more ominous. Here they indicate irritability of the myocardium which may produce ventricular tachycardia or ventricular fibrillation and death. Such patients should therefore be treated with quinidine sulfate 0.2 Gm. 3 or 4 times daily or procaine amide (Pronestyl) 250 to 500 mg. 3 or 4 times daily.

Ventricular premature beats constitute a frequent sign of digitalis intoxication. Bigeminy is commonly seen in this situation. This condition is also dangerous in that more serious and perhaps fatal arrhythmias may result if digitalis is not withheld. In addition to stopping the digitalis, procaine amide 250 to 500 mg. four times daily or every four hours will help terminate the irregularity. Potassium chloride, 1 or 2 Gm. 3 or 4 times daily should also be used if renal insufficiency is not present, because potassium helps protect the myocardium against the effects of digitalis intoxication.

In patients with cardiac failure who have not been digitalized, frequent premature beats may be due to irritability of the myocardium from anoxia or other factors associated with the failure. After digitalization and compensation such premature beats frequently disappear.

Paroxysmal Supraventricular Tachycardia

The majority of these tachycardias are atrial, but some originate in the AV node. Both are treated the same way. Paroxysmal atrial tachycardia occurs commonly in patients with normal hearts, but atrial and

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nodal tachycardia may result from digitalis intoxication, or may occur in patients with heart disease. These tachycardias are uncomfortable even in normal individuals. They are likely to precipitate heart failure or coronary insufficiency in patients with heart disease, and they may cause hypotension or syncope. In infants they readily cause heart failure.

The attacks may be short with spontaneous reversion to a normal rhythm. If not, vagal stimulation should be tried, and a minority of these tachycardias will be promptly stopped by this procedure. Carotid sinus pressure or massage is the first method to try. It may be done on either side, but never bilaterally at the same time. Stimulation should be stopped promptly when the rhythm returns to normal. The Valsalva maneuver (forceful expiration against a closed glottis) is another useful method of vagal stimulation. Pressure on the eyeballs or the production of vomiting cause too much discomfort and are less desirable than drug therapy. Sedation may be most helpful. Nembutal 0.2 Gm. to cause sleep may terminate the arrhythmia.

The drug therapy of choice is rapid digitalization if the patient is not taking digitalis. This may be accomplished by giving lanatoside C (Cedilanid) intramuscularly or intravenously 0.8 mg. followed by 0.4 to 0.8 mg. in one or two hours if necessary. Rapid oral digitalization may also be used. Vagal stimulation may be effective if tried again after digitalis therapy is started.

If digitalization does not terminate the tachycardia, quinidine sulfate should be given. Some physicians prefer quinidine to digitalis initially. A test dose of 0.2 Gm. orally should be given unless the situation is extremely urgent. Some reactions to watch for are bronchospasm, urticaria, vomiting or hypotension. If there are no evidences of hypersensitivity, 0.2 Gm. should be given every 2 hours for five doses. If this is ineffective after a rest period, 0.4 Gm. may be given every 2 hours for five doses or later 0.6 Gm. per dose if necessary. The patient should be observed before each dose of quinidine and the drug be discontinued or a maintenance dose be started when conversion occurs. When high doses are necessary the electrocardiogram should be used to follow the effects of quinidine on the myocardium. If the QRS complex widens 25 per cent or more during the administration of the drug, it should be discontinued.

If there is no response to quinidine, Pronestyl may be tried. Although this drug is more uniformally effective in the ventricular arrhythmias, it is often useful in those of atrial origin. Five hundred to 1,000 mg. may be given orally followed by 500 mg. every 2 to 4 hours.

The use of Mecholyl is not advised except in unusual circumstances because of its danger.

Maintenance digitalis or quinidine therapy may help prevent recurrences of tachycardia in patients subject to frequent attacks.

Paroxysmal Ventricular Tachycardia

This serious arrhythmia usually occurs in patients with coronary artery disease, frequently after myocardial infarction. Its effects on the circulation are usually more profound than those of the supraventricular tachycardias. Termination in ventricular fibrillation is a great danger. The treatment, therefore, is urgent.

Pronestyl intramuscularly or orally 500 to 1,000 mg. is the treatment of choice. This may be repeated at 2 to 4 hour intervals until effective, or until toxic effects occur. In extreme cases Pronestyl may be given slowly intravenously no faster than 50 to 100 mg. per minute for a total of 1,000 mg. The administration should be stopped when the arrhythmia is terminated. Hypotension may result from intravenous Pronestyl and widening of the QRS complex may occur as in quinidine therapy, signalling the danger of further administration of the drug.

Quinidine sulfate by mouth or quinidine lactate or gluconate intramuscularly may be used instead of the procaine amide. Quinidine 0.4 to 0.6 Gm. should be given every 2 hours until reversion occurs or evidence of toxicity to quinidine appears. After five or six doses extreme caution should be observed.

After the arrhythmia is terminated, quinidine 0.2 Gm. every 4 hours or Pronestyl

500 mg. every 4 hours should be given for several days to prevent a recurrence.

Intravenous quinidine is extremely hazardous and is seldom necessary if the other measures mentioned above are used. It should be pointed out that quinidine and Pronestyl also may produce ventricular tachycardia as a manifestation of toxicity.

Since digitalis increases the irritability of the heart and in toxic amounts may cause ventricular tachycardia, it is usually contraindicated in this disorder. If the patient is not taking digitalis, severe heart failure associated with ventricular tachycardia may be treated with digitalis with occasional benefit.

Atrial Fibrillation

This common arrhythmia usually occurs in patients with heart disease, but it occasionally appears in normal hearts. It may be paroxysmal or chronic, and before treatment the rate is usually rapid. Heart failure and embolic phenomena are frequent complications.

The first step is to control the ventricular rate by digitalization. This should ordinarily be done by the oral route. Intravenous Cedilanid is indicated when there is associated acute pulmonary edema. Occasionally reversion to a normal sinus rhythm follows digitalization.

After the apical rate is 70 to 80, conversion with quinidine should be considered if the irregularity has been recent in onset, and if advanced cardiac enlargement and cardiac failure are not present. Digitalis therapy is maintained while quinidine is being used. The administration of quinidine should be as described under paroxysmal supraventricular tachycardia. In less urgent cases, quinidine may be given every 4 hours around the clock starting with doses of 0.2 Gm. the first day, 0.4 Gm. the second day, and 0.6 Gm. the third day. The four hour intervals give ample time for observation of the patient between doses for cessation of the arrhythmia or for toxic effects, but greater intervals are not desirable.

When large doses of quinidine are required to produce conversion, recurrence of the fibrillation is likely, and the attempts may have to be abandoned in favor of maintenance digitalis therapy.

After conversion occurs, 0.2 to 0.4 Gm. of quinidine should be given every 4 hours for a few days, and later 3 or 4 times a day to prevent recurrence. Maintenance doses of quinidine may be given indefinitely when necessary without difficulty, except for extremely rare instances of drug fever or thrombocytopenic purpura.

Pronestyl may be used if quinidine fails to convert the arrhythmia, and it may be effective especially in paroxysmal attacks.

Atrial Flutter

This less common atrial arrhythmia usually is associated with heart disease, and it may be paroxysmal or chronic. Here also the primary consideration is to slow the ventricular rate with digitalis by increasing the AV block. Usually the patient presents with a 2:1 AV block and a ventricular rate of about 150 with an atrial rate of about 300. With digitalization about a 4:1 block is desirable with consequent reduction in the ventricular rate to about 75. After the rate is controlled, conversion with quinidine may be considered, but this is usually less effective than in atrial fibrillation. At times the arrhythmia changes to a sinus rhythm after digitalis has been stopped. Sometimes it changes to atrial fibrillation after digitalization which may be converted to a sinus rhythm with quinidine. Chronic flutter with maintenance digitalis therapy may have to be accepted.

Stokes-Adams Syndrome

This term refers to episodes of cerebral ischemia associated with AV block manifested by attacks of faintness, syncope, or convulsions. These are consequent to slow ventricular rates, ventricular standstill, or ventricular tachycardia or fibrillation. This is a dangerous condition and is usually associated with serious heart disease.

The classical therapy for these attacks is epinephrine 1:1000, 0.3 to 0.5 cc. subcutaneously, every one or two hours as needed. Epinephrine in oil may be used to lessen the frequency of injections. Ephedrine orally 25 mg. 3 or 4 times daily is frequently used for chronic treatment.

More recently, isopropylarterenol (Isu-

prel) hydrochloride sublingually in doses of 15 to 30 mg. every 3 or 4 hours has been found to be effective. This drug increases the rhythmicity of the higher pacemakers, has little pressor effect, and does not seem to significantly increase the irritability of the heart. It is helpful even in the episodes due to ventricular tachycardia or fibrillation in contrast to the hazard of epinephrine in these situations.

Pronestyl and quinidine are contraindicated in AV block even in the attacks due to ventricular tachycardia or fibrillation. These drugs depress the idioventricular pacemakers and tend to promote the occurrence of the ventricular arrhythmias.

Zoll and his associates[1] have devised an external electric pacemaker not yet widely used. This instrument by rhythmical electrical stimulation of the heart through the chest wall has been frequently successful in resuscitating patients with Stokes-Adams attacks due to asystole or slow ventricular rates. It is less effective when the spells are due to ventricular tachycardia or fibrillation. This method seems to hold considerable promise for the treatment of this condition as well as for cardiac arrest due to other causes.

Digitalis Intoxication

Digitalis intoxication can cause any arrhythmia, and it is a common offender. Some of these are ventricular premature contractions with bigeminy, AV block of any degree, ventricular tachycardia, atrial tachycardia with AV block and nodal tachycardia. Intoxication is encouraged by rigid predetermined regimens of digitalis administration. Low serum potassium predisposes to digitalis poisoning, and this may occur from mercurial diuretic therapy.

Treatment of arrhythmias due to this cause consists first of stopping the drug. It may take several days for the effects of the long-acting forms of digitalis to be lost. Since potassium serves as an antidote for digitalis, potassium chloride may be given orally as previously described if renal insufficiency is not present. In more urgent situations, potassium chloride 5 Gm. in 1000 cc. of 5 per cent glucose solution may be given intravenously no faster than 60 drops per minute until the arrhythmia ceases. Pronestyl is frequently helpful in treating ectopic rhythms due to digitalis poisoning, but it and quinidine as well are contraindicated in AV block of high degree.

Cardiac Surgery

The increasing employment of cardiac surgery has emphasized the problems of the cardiac irregularities. In the preoperative period good control of cardiac failure and avoidance of electrolyte disturbances and digitalis intoxication are good preventive measures. Prophylactic administration of quinidine or Pronestyl before operation is a controversial subject, but it may be employed in selected cases.

During the operation, transient premature beats and short runs of paroxysmal tachycardia are almost the rule. If the paroxysmal tachycardia is prolonged, Pronestyl intravenously, as previously described, is the treatment of choice regardless of the origin of the tachycardia.

The treatment of cardiac arrest and ventricular fibrillation occurring during operation is of utmost importance, but that is a subject of itself and will not be discussed here.

In the postoperative period following operation in the mitral valve, quinidine sulfate 0.2 Gm. every 4 hours should be given prophylactically to patients with a sinus mechanism, since there is a high incidence of postoperative atrial fibrillation. If it occurs it may revert spontaneously or may be converted with moderate quinidine therapy. If this is not successful in the early postoperative period, another attempt with quinidine, in a few weeks or months, often will be successful.

Conclusion

The management of the cardiac arrhythmias may range from a dramatic and sometimes life-saving procedure to the simple reassurance of an anxious patient that his irregularity is benign and needs no treatment. Again, the ability to diagnose accurately, and to follow the arrhythmias by auscultation and the electrocardiogram, is an extremely useful skill and is of utmost importance in proper therapy.

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Discussion

DR. JOHN D. YOUNG (Memphis): I wish to commend Dr. Kyle on the comprehensive coverage of the subject cardiac arrhythmias in such a limited period of time. His approach to the problem of arrhythmias is a practical one and I am in agreement with his therapeutic suggestions. It is my opinion that one may develop a high degree of accuracy in the bedside diagnosis of cardiac arrhythmias if one will examine each case carefully and correlate the physical and electrocardiographic findings. The electrocardiograph has one of its most useful applications in the diagnosis and follow-up of cardiac arrhythmias.

I wish to stress one point which I feel is extremely important. Dr. Kyle stated when heart failure occurs in an undigitalized patient with ventricular tachycardia, digitalis may be beneficial. I wish to recommend the use of intravenous lanatoside C (Cedilanid) in the desperately ill patient with heart failure and ventricular tachycardia. I believe that digitalization with lanatoside C (Cedilanid) may be lifesaving in the emergency situation when a patient goes into sudden severe heart failure with ventricular tachycardia. This problem most often arises in acute coronary occlusion with myocardial infarction. In the past, I had been opposed to the use of digitalis in this situation and used quinidine and procaine amide (Pronestyl) without success. In the panel discussion on cardiac arrhythmias at the American College of Physicians last year, digitalization of previously undigitalized patients with heart failure and ventricular tachycardia was recommended. I tried it with success in a patient a few months later and a colleague of mine had a similar success. I am interested to note that similar opinions have been expressed in recent medical writings.

If one accepts this idea, one is in a position to recommend the use of digitalis in all of the rapid arrhythmias in patients who have not had digitalis. One is therefore relieved of the therapeutic dilemma of trying to decide whether or not to use digitalis in the desperately ill patient with heart failure and a rapid arrhythmia.

One, of course, must bear in mind that ventricular tachycardia may result from over-digitalization and one must then rely on potassium salts, quinidine, or Pronestyl. It is my opinion that in the problem of the patient who develops a cardiac arrhythmia due to excessive digitalis, one should use potassium chloride by mouth or intravenously as the first procedure after digitalis has been stopped.

I again wish to thank Dr. Kyle for a most interesting and informative paper.

Sudeck's Atrophy in the Hand. Plewes, L. W.: Bone & Joint Sur., 38-B; 195, 1956.

During a three year period, 80,000 new patients were seen on a specific Accident Service and during this time Sudeck's atrophy was recognized on 37 occasions. Two-thirds of these cases were in women, and the average age for the entire group was 58 years of age, with a range of 33 to 76 years. The causative factor was most frequently an injury in the region of the wrist, specifically Colles' and Smith's fractures being the most common. The symptoms develop at an average of eight weeks after injury, and are accompanied by hyperaemia, obliteration of skin creases, loss of tissue turgor in the pulp, changes in skin temperature and color, limitation of motion, partial loss of grip associated with pain, swelling and dysfunction. The characteristic radiograms are recognizable in six to eight weeks, and consist of spotty rarefaction particularly at the end of the phalanges and metacarpals. Treatment of this group of patients was conservative and consisted of judicious use of heat, elevation of the limb, and graded function. Cervical sympathetic chain blocks will relieve pain, but the authors found heat to the extremity to be just as effective. Conservative treatment is effective if initiated within six weeks of the onset of the symptoms. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

Here is a technic which makes for much better surgery in the biliary tract, especially in the avoidance of complications and secondary operations.

CHOLANGIOGRAPHY*

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All of us, when we have completed our efforts on any given problem, like to have the feeling that the job is well done, complete with no possibility of failure due to any omission on our part. In the exploration of the biliary system that feeling of security is often lacking. Cholangiograms, although by no means infallible, are helpful to confirm or deny the presence of further disease, and can give information that leads to a more satisfactory completion of the case.

That the problem of residual common duct stone is a widespread one is attested by the numerous publications on the means of utilizing various solutions to try to dissolve them or to force their passage. Pribram[1] Hicken, McAllister and McCall,[2] reporting from a study of 550 patients who had had stones removed from the biliary ductal system, showed that 20 per cent still carried calculi within this system as shown by postoperative cholangiogram. Sullins and Sexton[3] estimate the instance of stones remaining in the ductal system after gall bladder surgery to be from 2 to 26 per cent.

Any surgeon who has suffered the embarrassment of discovering that he has overlooked a common duct stone is most anxious to explore every means of avoiding such a mishap again. Operative cholangiography, because of its own inherent limitations, will not prevent such an occurrence. It is, however, a valuable adjunct in the exploration of the biliary system. It will in many instances tell if the duct has not been completely cleared of stones or tumor. It has on occasion indicated the need for exploration of the common duct when all other indications are lacking. The procedure has also saved exploration of the duct for some patients and in so doing reduced the morbidity and length of hospitalization.

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Use of the Cholangiogram

Although radiopaque materials were injected into the biliary tract by Saralegui,[4] Cotte,[5] Gabriel,[6] and Overholt,[7] it was the work of Mirrizzi[8] that initiated the operative cholangiogram. The earlier workers injected an iodized oil into the tract to demonstrate the biliary tree. The change from oil to a water soluble and miscible radiopaque solution eliminated some of the earlier deficiencies of the procedure.

The effectiveness and accurracy of the maneuver are dependent upon several factors but most especially upon the interest of the operator in the procedure, the cooperation between the surgeon, anesthetist, and radiologist, and the experience of interpretation gained by frequent use and study. The use of cholangiograms will not replace or substitute for good surgical judgment in making a decision to explore the common duct. Neither will a normal appearing cholangiogram nullify or override any other indication for exploration that may be present. In borderline instances, however, and with a good film as mentioned above, it can be a deciding factor.

The usual indications for explorations of the common duct are: (1) history of jaundice with attacks of biliary colic; (2) history of colic and no stones found in the gall bladder; (3) palpable masses in the common duct; (4) enlarged or thickened common duct; (5) small stones in the gall bladder with a large cystic duct; (6) recurrent pancreatitis; and (7) filling defects demonstrable by cholangiography when other indications are not present.

Technic

The equipment needed for a satisfactory cholangiogram is not elaborate and is found in most hospitals. A portable X-ray machine and a portable Bucky grid are the only two items of special equipment.

The portable Bucky grid is placed on an ordinary operating table and secured in

place with one or two strips of adhesive tape. The patient is placed on the operating table in such a fashion that the region of the gall bladder and cystic duct is in the center of the X-ray film. Since the usual handstrap cannot be used as it will interfere with exchange of film cassettes in the Bucky grid, a folded sheet is placed under the patient with the fold on the left side of the table. The padded right arm and elbow are then pinned between the two free layers of the sheet. Recently we have been rotating the patient slightly to the right by the use of pads or folded towels under the left shoulder and hip. This can be done either at the time the patient is placed on the table or can be accomplished immediately before the X-ray exposure is made. The slight rotation of the patient by this elevation of the left side will usually prevent the superimposition of the shadow of the lower end of the common duct over the shadow of the vertebral bodies. The operative field is draped widely so that towel clips will not obscure the common duct shadow, and when skin towels are applied they are sutured in place rather than held with clamps. Care must also be used that no metallic objects, such as electrosurgical plates, are interposed between the film and patient. Several errors in technic are reported by Douglas, Lewis and Mehn.[9]

The surgical exposure of the gall bladder is made in the customary fashion. The abdomen is explored and then the gall bladder isolated with gauze packs. When placing these packs, care must be exercised that the radiopaque markers are not at a point that will obscure the shadow of the biliary tree. It is best to leave that corner of the pack well away from the abdominal wound. Palpation of the gall bladder, the common duct, and pancreas for defects is carried out. If it is determined that the gall bladder has to be removed, the cystic artery is isolated and ligated in continuity. Two or three ligatures are so placed. This way one is less likely to damage either a normally placed or anomalous right hepatic artery. The cystic duct is next isolated, a ligature placed near the junction of the ampulla. The cystic duct is notched and probed with a mosquito clamp. A small canula is placed in the duct and bile allowed to flow through the canula to remove any air in its lumen. Some people use a ureteral catheter rather than the canula. I prefer the canula because it can be anchored in place with a ligature with more security than the catheter without placing it all the way into the common duct. At this point the syringe and tubing containing the Diodrast are attached to the canula. All air is carefully removed from the system before it is connected. If the hub of the needle does not fill with bile, it can be filled with saline from a syringe with a hypodermic needle. A small amount, 1 to 2 cc. of dye, is injected to be sure that the dye flows freely into the ductal system. The anesthetist, at this point, should have the patient on controlled respiration. When he signifies that he does have this control, 6 to 10 cc. dye is injected. Near the end of this injection the anesthetist is notified the duct is filled, he in turn signals the X-ray technician to make the exposure at a time when he has the patient at respiratory rest. With this coordination blurring of the shadow is avoided with the least possible time of respiratory rest.

The extirpation of the gall bladder is accomplished while the film is processed. In this way the cholangiogram has caused little addition to the operative time. There are times when the gall bladder is very large and tense, and is removed before the duct is canulated and the dye is injected. In such instances the gall bladder bed can be closed and the appendix (if present) be removed, thus avoiding any loss of operative time while the film is being processed.

There are other times when indications for exploration of the common duct are already present without the cholangiogram. We think it is worthwhile to do the cholangiogram nonetheless. It may show the number of stones present, and when the duct is opened one then must be sure to recover at least as many stones as are seen in the cholangiogram.

Operative cholangiography also has a useful function after exploration of the duct. Once the exploration of the duct is completed and it has been closed snuggly about the T-tube, dye is injected through the T-

tube. It is much more difficult to avoid air in the system with this technic. Air bubbles in an otherwise satisfactory cholangiogram are the defects most difficult to correctly evaluate and differentiate from stones. If the T-tube has not been filled with bile against gravity, the bile can be injected into the side of the tube close to the common duct. If any filling defect can be demonstrated the duct can be reopened and re-explored.

The delayed or postoperative cholangiogram I feel is a "must" in every instance where the common duct has been explored. This is usually done about 9 or 10 days postoperatively. By this time there is usually no drainage of bile around the tube, the tube is clamped part of the time and is about ready for removal. The T-tube is allowed to be full of bile and then clamped. It is easier to avoid the introduction of air if the dye is injected with a syringe and needle into the tube proximal to the clamp. Films are made in the anteroposterior and oblique positions for filling defects. Anteroposterior films are made 5 and 10 minutes after the injection to show the emptying of the dye from the common duct into the duodenum.

Once a good film of the shadow of the biliary tree is obtained, what can we reasonably expect to demonstrate?

1. The patency of the cystic duct, in cases where the gall bladder is not to be removed but left in place for a possible anastomosis. Obviously a cholecystenterostomy would be of no benefit in distal common duct obstruction if the cystic duct were obstructed.

2. Strictures, either congenital or traumatic. in the common duct or its radicals. Stenosis of the sphincter region is also important. This is especially important in the post-cholecystectomy syndrome. (Fig. 1.)

3. Anomalies of the bilary tract. Information on these can facilitate dissection and enable the operator to avoid injury at critical points.

4. Stones in the biliary tree.

5. Polyps, which usually cannot be otherwise identified, but which can in some instances be shown with this procedure.

6. In many instances the relationship of the common bile duct and the pancreatic duct. This is obviously of great importance



Fig. 1. No history of jaundice or pancreatitis. Small cystic duct, small common duct; only indication present for choledochotomy is the filling defect in the operative cholangiogram. (No dye into duodenum and a crescentic defect in the end of common duct.)

if pancreatitis has been a problem. It is of future importance should pancreatitis develop postoperatively, either early or late. Failure of the pancreatic duct to fill does not eliminate the "common channel" possibility, but if the "common channel" is demonstrable there is a great possibility that sphincterotomy will relieve the pancreatitis.

The judicious use of this information will lead in many instances to the opening of the common duct and to correcting the defects which would otherwise go unrecognized and possibly require another operation.

Where the clinical indications for exploration of the common duct are borderline, a normal cholangiogram can often save the common duct from exploration when such a cholangiogram shows it to be free of filling defects and the dye to flow freely into the duodenum.

The information acquired from the cholangiogram will often help to more accurately evaluate the disease process and to institute appropriate treatment. Especially is this true with polyps, pancreatitis, or stenosis of the ampulla of Vater.

Summary

The more one uses cholangiography the more proficient he becomes in interpretation, and the more aid he receives from this adjunct to biliary tract surgery.

Every patient who has had drainage of the biliary tract should have a cholangiogram before the drainage tube is removed.

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Discussion

G. BAKER HUBBARD, M.D. (Jackson): It is a pleasure to have this opportunity to discuss such a fine paper; the personal experience of such a fine surgeon is invaluable to all of us. Operative cholangiography has been so well presented it leaves little for discussion.

The question that arises in my mind is,—if this is such a valuable procedure why is it not used in all, or at least in the majority of biliary tract explorations?

I have tried to enumerate the disadvantages with a discussion of each:

1. Cost to the patient. Is it prohibitive? My answer is no. Our charge by the Jackson Hospital is $20; in some places it is $30. This is very reasonable for such a valuable procedure in dealing with an almost insurmountable problem, that is the elimination of all pathologic change in the common duct and providing a more exact knowledge of the anatomy.

2. Sensitivity to the drug. The only sensitivity I know of is iodine sensitivity; this is rare and is usually manifested by a mild dermatitis.

3. Prolongation of the operation. This could be a real disadvantage in a critically ill patient, and the procedure should never be used if the extra time involved would be likely to result in a catastrophy. The amount of extra time utilized is 15 or 20 minutes, and it is time well spent. Frequently a large part of this time can be spent accomplishing some part of the operation while one is waiting for the films.

4. Misinterpretation of the radiographs. Used judiciously, what has one to lose? Granted a shadow is seen in the radiograph that is interpreted as a stone and on exploration of the duct one does not find the stone, there is no loss except of time.

Our technic is practically identical with Dr. Fletcher's. We use a polyethylene tube where he uses a cannula. The main point in technic to remember is that the introduction of air in the ductal system must be prevented and it matters little how the media is introduced if this is accomplished. Gas bubbles in the common duct usually appear as stones.

At the Jackson Clinic only about 10 per cent of our so-called gall bladder operations are accompanied by an operative cholangiogram. This figure should be considerably higher, even 70 or 80 per cent, and I hope in the future we will use the procedure more often. We are in an enviable position in having a radiologist whose primary interest is the use of contrast media in the biliary system. During operative cholangiograms Dr. John R. Thompson comes to the operating room and helps the technicians make their exposure and stays to help the surgeon interpret them.

We do postoperative cholangiograms in all instances in which the patient has a tube in the common duct.

Just one word about our management of cases with a retained stone in the common duct as demonstrated by postoperative cholangiogram. We leave the T-tube in the common duct and do nothing for at least 6 months; during this time we do repeated cholangiograms and to our surprise at least 50 per cent of the stones will disappear. What happens to them I do not know. Dr. Warren Cole of Chicago, in a personal communication, has stated that they may be either absorbed by a thinner bile or they are passed by a dilated ampulla, both the thinning of the bile and dilated ampullae are known to occur after cholecystectomy. Thirdly, one might compare this situation to an impacted ureteral stone which may sometimes be treated by a simple drainage above, this presumably allows for reduction in edema and spasm surrounding the stone and subsequent spontaneous passage. Any retained stone

after this period of time usually must have operative interference.

In closing I want to mention intravenous cholangiography with Cholografin. This is the trade name of the drug made by Squibb, and is furnished in a 52 per cent solution of the disodium salt of N, N'-a-dipyl-bis (3-amino-2:4:6 triiodobenzoic acid), the empirical formula of which is $C_{20}H_{12}O_6N_2I_6Na_2$. This I feel is the greatest recent advance in the field of contrast media for the study of the biliary ductal system. It is invaluable for the study of a patient who has had a cholecystectomy with persistent symptoms or signs.

Again I want to thank you for this opportunity to discuss this paper.

A Rational Approach to the Surgical Needs of the Cerebral Palsy Patient. Baker, Lenox D.: Bone & Joint Surg., 38-A; 313, 1956.

The indications for and results from orthopedic operative procedures as applied to patients with cerebral palsy are discussed with particular reference to the lower extremities. Deformities should be corrected before rehabilitative measures are instituted in the cerebral palsy patient. The particular operative procedures discussed are tendon transplantations, usually combined with a triceps surae lengthening to correct the spastic valgus and equinus deformities of the feet. Talocalacaneal bone blocks are done when the calcaneus has assumed the valgus position. In some patients, the pes planus deformities should be surgically corrected. Knee flexion deformities demand careful evaluation for determining the deforming force, and the surgical attack should be directed at this deforming force. The gastrocnemius may require lengthening, the iliotibial band may require division, and at times the patellar tendon should be transplanted distally on the tibia. The hip flexion internal rotation deformity must be differentiated from the simple adduction flexion deformity. The internal rotation deformity is usually caused by the tensor fasciae latae and may have marked weakness of the gluteals, abdominal and hip abductors. The Yount operation consisting of the division of the tensor fasciae latae may be sufficient to correct the internal rotation deformity at the hip, but often must be combined wih a neurectomy of the anterior branch of the obturator nerve and a tenotomy of the adductor longus and gracilis. The postoperative care of these patients is discussed. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

The Effect of Anticoagulant Therapy on Bone Repair. Stinchfield, Frank E.: Sankaran, Balu, and Samilson, Robert: Bone & Joint Surg., 38-A; 270, 1956.

Using rabbits and dogs, a semicircular disc of bone was removed from the ilium subperiosteally, and then replaced, and the wounds closed. In some of the animals, heparin was used and in others, Dicumarol was used. And in some animals, varying combinations of the two drugs were used. In the control rabbits, bony union occurred in four weeks, and in the control dogs it occurred in six weeks. When the animals received anticoagulant in the preoperative period they showed evidence of delayed union. When the anticoagulants were given in the immediate postoperative period fibrous union resulted. When heparin or Dicumarol were given one week after the operation, delayed union occurred. The authors do not conclude that nonunion will necessarily occur in a patient who has received anticoagulant therapy, but this study was begun because of the occurrence of pseudarthroses in four patients who had received anticoagulant therapy for thrombophlebitis immediately after an operation. (Abstracted by Thomas F. Parrish, M.D., Nashville, Tenn.)

The psychologic effect of facial scars, particularly in the young and in women, is such that any treatment which may ameliorate the condition is worthy of trial. Skin planing offers such possibilities.

SKIN PLANING IN THE TREATMENT OF ACNE SCARS*

BERNARD J. PASS, M.D., Nashville, Tenn.

Every doctor at some time comes into direct contact with the cosmetic problem of acne scarring. We are all aware of the present-day worship of the unblemished milky complexion of women and the clean shaven appearance of men. Advertisements are constantly showing women how to produce a smooth satiny complexion by various creams and cosmetics. Is it any wonder then that psychologic, social and economic consequences are felt by those who have facial scars? As Malkinson[1] stated, "Many patients are tormented by feelings of abnormality and inferiority and shun all but essential social contacts. Girls are deprived of social engagements, young men are rejected for employment, and obstacles to marriage in either sex may be considerable. The degree of mental reaction is of course an individual variant but not infrequently, it is of sufficient severity to produce serious depressions and withdrawal." Therefore, any procedure that reduces to a minimum these cosmetic deformities, and is both successful and relatively harmless is of infinite value. Such a method is now available.

Historical

Skin planing or dermabrasion, as it is called, is a new technic of an old principal. Many measures have been used in the past, but have not withstood the test of time. These measures consisted of electrodessication, scarification surgical excision, freezing and peeling with carbondioxide, chemical caustics, surgical shaving and mechanical abrasion with sandpaper. The sandpaper method has been the most widely known treatment in recent years.

In 1953, Kurtin[2] first reported a new method for the correction of acne scars and coined the name "skin planing." The interest of dermatologists was aroused because skin planing is an office procedure, narrow steel brush enables the operator to general anesthesia is not necessary, and the treat easily small pits and areas as in the nasolabial fold. The method eliminates the potential risk of the future development of silica granuloma as in patients treated with sandpaper.

Procedure

The procedure essentially consists of freezing small areas of the face with dichlorotetrafluro-ethane commercially known as "Freon." The frozen skin is insensitive, bloodless, and rigid. This rigidity permits adequate resistance to the abrading instrument so that the elevations and depressions maintain their relative positions under pressure. Originally Kurtin used ethyl chloride; however, this is inflammable and explosive, and is toxic by inhalation. With ethyl chloride a blower was needed to produce instant freezing. Freon which has replaced ethyl chloride does not have these drawbacks. It is not inflammable, explosive nor toxic, and it is not a primary irritant. A blower is not necessary because it freezes instantly.

The instrument used is a circular brush of varying thicknesses made up of stainless steel wire. The brush is attached through a flexible hand piece and shaft to a mounted motor which is a half horsepower and rotates 12,000 times per minute. A foot switch permits variable speed control.

The rotating brush is moved rapidly across the skin in a direction at right angles to the plane of the brush. This is important because the motion in the same plane as the long axis of the brush may result in grooving. The area is painted with gentian violet to help determine the depth of the pits and scars.

Bacitracin or polysporin on Telfa pads is used as an initial dressing. Telfa does not adhere as does ordinary gauze.

Preoperative instructions consist of:

*Presented before the meeting of the Tennessee State Medical Association, April 11, 1956, Memphis, Tenn.

(1) Phisohex is used for washing the face for three days before planing.

(2) Men should shave a few hours prior to planing.

(3) A small dose of oral sedative is given to allay apprehension.

Postoperative instructions are:

(1) Elevate the head of the bed for two nights. This reduces the degree of swelling.

(2) The dressings are removed in 24 hours and no further dressings are applied. The consensus of opinion among the dermatologists doing skin planing is the avoidance of the application of ointments permits the most rapid formation of the crust and subsequent healing.

(3) Cool boric acid compresses may be used for relief of discomfort. Patients are remarkably comfortable. At worst a slight burning sensation seems to be the most prevalent complaint.

(4) A dry crust will form in 36 hours or less.

(5) Patients are told not to wash or apply any medication while the crust adheres.

(6) The crust peels off in 7 to 10 days, depending on the depth of planing.

(7) After the crust is off, the face may be gently washed with Phisohex.

(8) Sun and harsh winds are to be avoided for six weeks. Temporary pigmentation may follow premature exposure of the skin to the sun.

(9) The pinkness of the planed area fades over a period of six weeks or more.

The average patient who is in need of skin planing usually requires two treatments. The interval between planings varies with different operators from between 4 to 8 weeks. There are patients who have such scarring that three or four planings are necessary.

Complications

Fortunately complications are few. Impetigo rarely occurs and is easily controlled by antibiotics. Milia may appear some weeks following the operation. They may disappear in time or may be expressed. Rarely postoperative redness may persist for several months instead of the usual six weeks. This usually results from premature exposure to the sun. Rarely, too, hyperpigmentation at the edges of the abraded area occurs. In a predisposed individual hypertrophy may appear. Fortunately these are seldom seen. I have had one patient in whom small hypertrophic scars appeared but they were readily flattened with subsequent treatment.

Comment

Rattner and Rein[3] recently wrote "the operation to flatten scars is a cosmetic procedure, not a lifesaving one; therefore, careful selection of patients is as ethical a plan as it is wise. To treat a patient who expects a perfect result is to invite unpleasant consequences, because the results of treatment are usually good rather than dramatic."

It is best to carefully point out to patients what can be expected from their treatment. Markedly unstable individuals should not be planed nor should those with minimal involvement.

I wish to emphasize emphatically that patients who have severe acne scarring are entitled to be unhappy and to remain unadjusted to their appearance. It is very well for those of us who do not have this handicap to speak of learning to live with their deformity, but that is not the patient's outlook. Like everything else in medicine dermabrasion is not perfect but this is a procedure which produces extremely satisfactory results in heretofore hopeless situations. In a survey conducted by Rein and Blau in 1954, 97 physicians with a total of 2,206 cases, which had been followed sufficiently long enough for evaluation, felt that the results were extremely satisfactory.

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Discussion

MAX H. COHEN, M.D. (Memphis): I am in essential agreement with this timely paper.

I wish to commend Dr. Pass on his fair and conservative appraisal of dermabrasion. It has been unfortunate that some of the lay press have attributed miraculous new skins to this procedure. Even the A.M.A. sponsored magazine, "Today's

Health," December, 1955, had an article in bold headlines by a doctor titled ("Acne Scars Can Be Removed"). It is best to emphasize that patients should be told to expect improvement, not removal of scars.

Certain superficial acne scars as seen after chicken pox do better than the deep puncture acne scars, the so called "ice pick" type. Wide wavy scars do not do well. Improvement may vary anywhere from 25 to 80 per cent. Some cases show more improvement than anticipated, others less.

Some patients get a psychologic lift out of proportion to the objective evidence of improvement. Dr. Rein and Rattner in the J.A.M.A. state, "In many cases the improvement in patient's well-being is so striking that it leads us to believe that we have taken too lightly the importance to patient of acne scars."

Also, planing of skin can be very effectively used for varicella scars, certain hypertrophic post-traumatic scars, chloasma pigmentations and superficial small tattoos.

The procedure is not fool-proof and an experienced operator will get the best results.

Clinical Implications of Errors in Electrocardiographic Interpretation. Prinzmetal et al. J.A.M.A. 161:2, 138, 1956.

This article deals with undue reliance of the electrocardiogram in the diagnosis and management of heart disease. The authors describe a symptom complex under the term "heart disease of electrocardiographic origin." The subjective symptoms are anxiety, weak spells and chest pain, while tenderness on firm finger-tip pressure over the anterior chest wall is the most significant finding on physical examination. These findings, along with poorly understood or misinterpreted electrocardiographic aberrations lead to the diagnosis of unwarranted heart disease.

In the approach to the question of the possible presence of coronary heart disease the electrocardiographic machine is used freely, and rightly so. However, harm can be rendered by incompetent and over-zealous interpretation of benign electrocardiographic changes. Departure from the assumed normal, especially of the S-T segment and the T wave, does not always mean abnormality of the myocardium. These changes may occur in young, healthy individuals. Body build may effect such changes and not infrequently such findings are seen in athletes and persons with tall bodies and narrow chests. The authors report that negative T wave changes have been observed in patients for as long as fifteen years with no evidence of heart disease.

The decision as to the existence of myocardial infarction may often rest on the history and physical examination because of the absence of significant electrocardiographic changes. Diffuse changes in the myocardium sometimes fail to alter the electrocardiogram, while relatively insignificant lesions in the superficial layer sometimes alter it markedly. It must also be recognized that changes due to infarctions may lag for a few days to a week behind clinical symptoms. Therefore, the clinical condition of the patient supersedes the electrocardiographic findings.

Recognition of those electrocardiographic alterations that do not denote myocardial disease is possible only through adequate knowledge of the usual variations. Knowledge of the patient's emotions and his attitude toward heart disease is often indispensable for correct electrocardiographic interpretation. The authors state that changes may appear in many instances as a result of fear of heart disease. Such patients must be convinced that the heart is sound and, usually, reassurance is adequate treatment.

Finally the authors suggest that in the interpretation of the tracings with equivocal S-T segment and T wave changes the term, "these changes may also occur in patients with normal hearts," should be added. (Abstracted for the Middle Tennessee Heart Association by Samuel S. Riven, M.D., Nashville.)

STAFF CONFERENCE

Vanderbilt University Hospital*

Postoperative Renal Shutdown

DR. CHARLES THORNE: The patient to be discussed this morning will be presented by Dr. John Griscom.

DR. JOHN GRISCOM: The patient is a 58 year old hardware store owner referred to Vanderbilt University Hospital because of vascular insufficiency.

Present Illness: The story began approximately 15 years ago when a moderate degree of hypertension was found, and a labile hypertension had been present for about 15 years. For 4 to 5 years he had noted some coolness of his lower extremities, and one year ago he began to notice intermittent claudication of his left calf and left ankle. Three months prior to admission, in order to warm his cool left foot, he had placed his foot in some water which was a little warmer than he had anticipated. A blister formed on his left foot which progressed slowly to the point of actual dry gangrene. His local doctor recommended lumbar sympathectomy and, following some progression of the ulceration, the patient finally agreed. Consequently, one month prior to admission, a left lumbar sympathectomy was done. At the time of operation, the doctor noticed an obliterating arteriosclerotic process which began two inches below the bifurcation of the aorta on the left with no pulsation in the common iliac on that side. He also grafted some skin on the ulceration on his left foot. Seven days after this operation the graft sloughed. In view of the findings at operation and failure of the local graft to take, his doctor sent him to Vanderbilt University Hospital for definitive therapy.

Physical Examination: He was found to have a blood pressure of 154/80. The positive physical findings were a systolic basal murmur, Grade II in intensity, which radiated into the neck. No pulses were palpable in his lower extremities except for a faint pulsation in the right femoral. There were moderate trophic changes in the lower extremities and a superficial ulceration about two inches by three inches on the dorsum of his left foot.

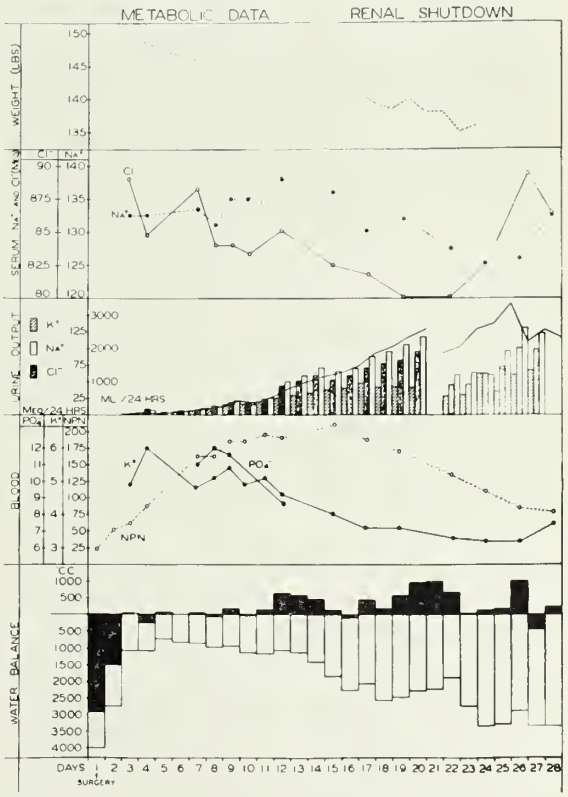
Laboratory Examinations: The routine studies including urinalysis, hemoglobin and white blood count were normal. X-ray films show some calcification in the iliac vessels.

Course in Hospital: On the thirteenth of December the patient was taken to the operating room where Dr. Walter Diveley placed a Y-homograft following resection of the lower part of the aorta and the proximal portion of the common iliac vessels. During operation there occurred several mild hypotensive episodes. Transfusion of 1500 cc. of blood was given during this time.

Postoperatively, on the third day, following the administration of about 3900 cc. of fluid on the operative day and 2500 on the first postoperative day, it was noted that only very small amounts of urine were being excreted. At that time he was seen by Dr. Newman. Postoperatively, his feet have warmed up very well and pulsations are palpable in the femoral arteries on both sides. There is beginning healing of his ulcer.

DR. ELLIOT NEWMAN: Before the patient leaves, I would like to say that any success we have had has been due, in large measure, to the wonderful spirit of this gentleman who underwent a good deal of therapy which may have been helpful but required understanding cooperation.

Dr. Griscom has made a very clear presentation and has prepared these excellent charts. (Chart 1.)



This morning I want to discuss the problem of renal shutdown and anuria following operations such as these. We do not have time to discuss fully the etiology of renal shutdown but I would like to say a few words about it first. Surgery of the abdominal aorta is becoming more frequent,

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and these people are usually in the older age group so that complications with regard to renal circulation and renal function are appearing with startling frequency. There are several theories concerning the etiology of renal shutdown. In the first place, we know that anesthesia and morphine, as well as excitement and pain, cause antidiuresis and lowered renal blood flow at the time of operation. Thiobarbital anesthesia and ether anesthesia cause lowered renal blood flow. In older people with poor elasticity of the arteries, the adjustment to lowered pressure by compensatory dilatation of the arteries is poor. A concentrated urine is produced. Certain amounts of toxic substances may be released during operation which may come from blood transfusions or damaged tissues. Proteinuria may be caused by the operation or anesthetic agents. These materials can precipitate in the renal tubules and as Oliver, at the end of his very elegant article on the etiology of lower nephron nephrosis concluded, "stopped pipes will not flow." The sections of the kidneys show myriads of casts and material plugging up the renal tubules in this situation with spotty necrosis of some tubular epithelium. There may be a special circumstance in this type of operation which is akin to what has been described previously as the "Crush Syndrome." The legs are without circulation for several hours while a graft is being placed. After a prolonged period of ischemia, a suddenly adequate circulation rushes through the legs aided also by the sympathectomy. If there has been any degeneration or increased permeability of the muscle membranes, myoglobin may be released and absorbed into the blood stream causing myoglobinuric nephrosis similar to hemoglobinuric nephrosis. Our patient did not show the big brown pigment casts in his urine. However, in other patients we have seen recently, the urine has contained large 'transfusion' casts and we did not know whether they contained myoglobin or hemoglobin. It is not easy to differentiate chemically myoglobin from hemoglobin. Perhaps plasma hemoglobin determinations would help diagnostically in this situation.

Certainly the avoidance of these factors at operation is obviously extremely important; the avoidance of anesthetic agents which lower renal blood flow, the avoidance of transfusion reactions and ischemia of the legs. I do not know how ischemia of the legs can be avoided. Perhaps refrigeration of the legs would help to preserve the muscle.

We shall now proceed to the problem of managing the patient once we have discovered that postoperative anuria or oliguria has occurred. The course is presented in the charts. His urine volume for ten days did not exceed 400 cc. per day. The first three days it was 10 cc. per day. During the next ten days the volume gradually rose to 2,000 cc. per day. The nonprotein nitrogen in the blood started at a normal level and rose almost in a straight line in eight days to 208 mg. per cent, leveled off for another ten to twelve days, then declined another ten days to normal. His serum potassium was high when we first saw him, between 5.0 to 6.0 mEq/L then fell steadily. His serum phosphorus, first determined on the fifth day, was 12 mg. per cent and then fell while his NPN was still rising. I will return to the interpretation of these results in a moment. His serum sodium concentration in the third week went down to 125 and then rose. Serum chloride followed more or less the same pattern. The patient's weight fell during the first twenty days a total of about ten pounds. Urinary output in electrolytes are charted also. At the time the urine volume rose, his total output of sodium, potassium, and chloride rose also progressively.

One of the most important factors that we have to manage when the kidney fails completely is the body water balance. The guiding principle in managing this patient was to try to keep the patient in perfect water balance, matching all losses with equal inputs. The water losses and gains were calculated carefully. Water gains or losses can be divided into sensible and insensible loss or gain. The *sensible* loss included urine, vomitus, suction fluids and stools. All urine, vomitus, and suction fluids were collected and measured. The *insensible* loss was a quantity we estimated

but there was good data from which we could make an accurate estimate. The insensible loss through respiration and skin is about 12 cc. per Kg. per day which in this man we calculated as about 700 cc. Of course, if the patient had sweated profusely or had fever we would have allowed more for insensible loss. In calculating the gain of water we used the same categories, namely, *sensible gain* and *insensible gain.* Sensible gain was what was administered by mouth and by needle. The insensible gain came from two sources. Food that is utilized is oxidized which results in the production of so-called water of oxidation. In our patient, we calculated that he was gaining about 200 cc. of water of oxidation. Then, there is another insensible gain of water which should be considered, namely, the water liberated from used tissue called "preformed water." It makes little difference whether the patient eats a piece of roast beef or his own tissue, water is part of the tissue used and if it is his own, it is in insensible gain. We calculated that he was gaining at least 150 cc. per day of preformed water which, when added to 200 cc. of water of oxidation, makes a total of 350 cc. of insensible gain. The water balance chart was made up on the basis of these calculations for determinations. On the first two days he had a positive water balance of 3000 the first day and 1500 the next day. After this he was placed on the balance regimen meaning that if he put out no urine, he received only the difference between his total gain and total loss, namely, 350 cc. of water per day. If he put out urine, he received 350 cc. of water plus the urine volume. In this way you can see that he was kept in nearly perfect water balance. For ten days he received only water and pure carbohydrate consisting of lactose solution, 15 grams in 60 cc. Lactose was used because it does not taste too sweet. It can be made even more palatable by a few drops of lemon juice. Later when he was given some solid food, the amount of water in the solid food was also estimated and added to the gain. We did not want him to deplete his fat and protein stores any more than necessary, so we begin to increase his food intake as soon as possible. I think this patient illustrates the fact that these therapeutic principles are practical and keep the patient in water balance while the kidney is recovering its regulatory function. Why did he lose weight? This is related to the problem of caloric requirements. For the first ten days, he received only about 400 to 600 calories in the form of carbohydrates. The remainder of his caloric requirement had to come from his own tissue protein, carbohydrate, and fat.

If one did not have accurate volumes collected, a good job could be done balancing the patient by following the weight carefully. If the patient's weight does not fall and he is only on 400 to 600 calories per day, he is unquestionably retaining too much water. If his weight goes up then he is getting far too much water. If there was only one factor to follow, the patient's weight would be most important in estimating proper balance of water.

The point in giving only carbohydrates should be stressed. We do not want to give any nitrogen or protein. We do not want to give protein containing foods because they also contain potassium, phosphate, and sulfate which are undesirable substances and will be retained. Food which is high in caloric value, which is easily assimilated and which will prevent the patient from breaking down his own protein is most desirable. One cannot prevent a small continuous protein breakdown; thus the blood NPN does tend to rise continuously. The general rule, if you are successful in holding back the protein breakdown, is that a rise of NPN of 10 to 15 mg. per cent per day will occur. This is equivalent to about 20 to 30 Gm. protein catabolism or breakdown per day. In other words, 20 to 30 Gm. of protein is converted to nitrogen a day. There are several complications which can accelerate the protein breakdown such as catabolic stimuli like infection, fever, or trauma of any sort. Anything which increases the metabolic rate will cause more protein breakdown. Keeping the patient as quiet as possible will slow down the NPN rise.

The blood phosphorus concentration was elevated but it fell while the NPN stayed up. If the patient had nausea or vomiting,

we switched to intravenous foods, feeling that vomiting is a stress for the patient. Some physicians have recommended forcing calories in the form of fat into the patient with the idea that it will do a better job of saving the patient's nitrogen stores. It seems unlikely that one can reduce the protein catabolism below 20 to 30 Gm. per day. Furthermore, the feeding of fat is likely to cause diarrhea and vomiting. If the patient vomits, there develops a sort of race between the physician and patient as to whether one can put it in faster than the other vomits it out. Also, forced caloric feeding usually means that the patient receives too much water with the food. Indeed, it may be fortunate that some of the patients have vomited, otherwise they might have gotten edematous.

Lastly, and perhaps least important, are the determinations of serum sodium and chloride concentration. Chloride and sodium concentrations both fell about twenty points. We paid no attention to these findings in our management. We did not give any concentrated salt. If we had wanted the laboratory record sheets to look better we might have given the patient some salt, but I think the benefit would have been on the cosmetic appearance of the laboratory sheet but detrimental to the patient. To be a little more exact, I mean that there is no direct relationship of the serum sodium and chloride levels to the need for increased intake of sodium and chloride. A low concentration does not necessarily mean that the patient's total is depleted. The only way to judge whether the patient needs sodium and chloride is to find out if the patient has lost some by mouth, rectum, or drainage tubes. Then losses can be accurately replaced.

We used to say that the body cells were "impermeable" to sodium and chloride. The word "impermeable" is a very over-simplified term and perhaps somewhat misleading. Our conceptions have become somewhat rigid concerning the "box-like" body compartments which hold the electrolytes. The sides of the boxes separating the cell compartments from the extracellular compartments are not made of impermeable material but are made of porous material. It is easily demonstrated by recent studies that the relationships of potassium concentration inside and outside the cell and sodium concentration inside and outside the cell are dynamic equilibria. There is an exchange going on at a rapid rate all the time. An active metabolic process is keeping most of the potassium inside the cell and most of the sodium and chloride outside. When the patient is sick, the concentrations are not kept in their proper relationships. There is a shift in the equilibrium, not necessarily a change in the total amount. This recovers when the patient recovers.

In the general management of the patient with anuria or renal insufficiency, I always feel extremely insecure giving any pharmacologic agents. Adequate knowledge of the behavior of drugs in the special situation of renal insufficiency is difficult to find. Many drugs are conjugated or degraded in the liver and then excreted by the kidney. Many drugs are excreted almost entirely by the kidney. Therefore, I think we must be very careful about the administration of even the simplest things. Let's consider enemas and cathartics. Deaths have been reported from magnesium sulfate, magnesium hydroxide and magnesium citrate given either orally or rectally. Magnesium is partly absorbed from the intestines. It is non-toxic to the normal person because it is so rapidly excreted by the kidney; but it can be toxic if what is absorbed cannot be eliminated. Enemas of other types may be undesirable. Fleet's enema, for example, contains 26 Gm. of sodium phosphate. Our patient developed a high phosphate blood level which fell when we treated the patient with amphojel and calcium lactate and no more Fleet's enemas. Also, cascara and other cathartics can cause bulk loss of fluid and electrolytes in the stool which can upset the patient's balance. The patient is a problem in balance therapy; thus the effect of any and all agents used must be considered. The use of cortisone and ACTH in renal insufficiency may be dangerous because of the catabolic effect of these drugs liberating nitrogen, potassium, magnesium and other tissue products which cause acidosis such as phosphate and sulfate.

I alluded to the phosphate balance problem in connection with Fleet's enema. When the patient develops high phosphate and low calcium concentration, what can one do? I believe it was Albright who first suggested the use of the aluminum salts (amphojel in this case). Aluminum binds phosphate in the gut and therefore removes some from the body fluids. Calcium salts of organic acids also precipitate phosphate and provide added calcium. I think this treatment was probably effective in this patient because the serum phosphate level fell in spite of a rise in other retention products like nitrogen. However, complications from aluminum salts and calcium lactate therapy may occur. Intestinal obstruction and impactions may be serious. Aluminum salts plus calcium lactate make very good intestinal cement. We had to relieve our patient several times of this dense material. Perhaps mineral oil would have relieved this impassibility.

Another procedure which may help prevent the rise in sodium phosphate is the administration of insulin with the glucose. Insulin is an anabolic hormone. The administration of insulin with glucose tends to drive phosphate back into the cells in conjunction with glucose and will temporarily lower the serum phosphate level. I am not sure how long this effect will last but one can lower the serum phosphorus level by adding ten units of insulin with every 20 Gm. of glucose given intravenously. In addition, the serum potassium concentration may be suppressed by the same procedure since glucose is stored in body cells with potassium.

The problem of treating infection in the anuric patient is important. A knowledge of the toxicity of antibiotic drugs in the presence of renal insufficiency is necessary. Penicillin is excreted by the kidneys; thus it is not necessary to give as much penicillin as is usually given to a patient with normal kidneys. If the patient has a reaction to penicillin it may be prolonged because of delayed elimination. Streptomycin is practically entirely excreted by the kidney so that accumulation of streptomycin is likely to occur. One dose of streptomycin will last two or three days in a patient with anuria. It has been suggested that if streptomycin is used one should do blood levels. Tetracycline is apparently safe (but it is absorbed poorly in the presence of amphojel). Chloramphenicol is supposedly destroyed by the liver and excreted by the kidney. I do not know anything about the degradation products which might be toxic. I feel very insecure about the use of antibiotics in renal insufficiency. A frequent cause of death in patients with anuria is infection. Antibiotics are important because infection will accelerate the deterioration of the patient.

I mentioned that the barbiturates are likely to cause renal insufficiency per se even without anuria during anesthesia, and they are powerful stimulants to the antidiuretic hormone of the pituitary. By and large, the long acting barbiturates like phenobarbital depend almost entirely on the kidney for excretion. Thus, phenobarbital in a patient with anuria can rapidly accumulate and produce drowsiness which may be confused with the symptoms of uremia. The shorter acting barbiturates, namely, amytal, nembutal, and seconal, are destroyed by the liver. Thus one can choose to use the shorter acting barbiturates more frequently, or use a longer acting one in a reduced dosage. At any rate, one should be particularly careful with the dose of a longer acting drug which might accumulate. Bromides, of course, are contraindicated because of accumulation and also they contain sodium and potassium. Cloral Hydrate is quite irritating to the stomach and it is said to be contraindicated in patients with renal insufficiency. Thorazine seemed to be helpful in this case because it suppressed hiccoughs and is anti-emetic. Its quieting effect is useful in the patient who is uremic.

DR. ROBERT HARTMAN: Has it been proved that anemia places an added load on the kidney?

DR. NEWMAN: One cannot detect any serious impairment of renal function from the standpoint of excretion of water or salt until the hematocrit falls below 25 to 30 per cent. We did not worry about the hematocrit of 30 to 32 per cent in this patient.

DR. SAMUEL RIVEN: What happened to the patient's blood pressure?

DR. NEWMAN: For the first two days, post-operatively, there was mild hypertension, (160-170/110). After that the blood pressure was normal. The elevation for the first two days may have been due to the large intravenous infusions.

DR. RICHARD FRANCE: The normal CO_2 combining power surprises me.

DR. NEWMAN: I think the picture of acidosis in uremia may partly be due to overzealous administration of sodium chloride in some patients. The net effect of sodium chloride physiologically is to cause a chloride acidosis.

DR. HARRISON SHULL: Are we not giving too much credit to absorption by the large bowel of this Fleet's enema. By and large, those enemas are not retained more than 10 to 15 minutes before expiration.

DR. NEWMAN: The role of the Fleet's enema in producing the high serum phosphate is really pure conjecture on my part. However, I think the lower intestine may not be as inert as might be imagined. One of the ways of getting rid of potassium is to give a cation exchange resin enema. When something reactive is placed in contact with the colon in ten to twenty minutes a significant exchange of electrolytes occurs.

DR. FRED GOLDNER: What about sweating? Was the water loss by this route taken into account?

DR. NEWMAN: That was included in the calculation of insensible loss. Of course, if the climate had been hot and humid, and if the patient had fever, we would increase this allowance of water. Weighing the patient would be the final check on the accuracy of our calculations.

DR. HUGH MORGAN: What sort of food did you give the patient after the period of restriction to the lactose solution?

DR. NEWMAN: Sodium, potassium, protein, and carbohydrates in foods have been accurately determined and are available. Vegetables have very little protein and a lot of carbohydrates and a large amount of potassium. The large potassium content of both fruit juices and vegetables may limit their use in renal insufficiency with potassium retention. Beef and eggs are very high in protein, phosphate and sulfate. Of course, if one could give *unsalted* butter (ordinary butter has much sodium in it), it would provide a lot of calories. However, butter by itself is rather indigestible. Alcohol has been suggested as having a high caloric value. It might be worth trying if it is tolerated. We gave this patient some sherry. Alcohol contains 7 calories per gram. Thus, 200 cc. alcohol would have 1,400 calories per day. That might not be too much for some people.

DR. THORNE: I am sorry that times does not permit further discussion of this interesting problem.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital

Fibrocystic Disease of the Pancreas (Mucoviscidosis)

DR. AMOS CHRISTIE: This 8 months old white child was admitted to Vanderbilt University Hospital for the first time with the chief complaint of "pneumonia and blue spells." The family history was essentially negative. It was a full-term baby of an uncomplicated pregnancy and uneventful delivery, weighing seven and one-half pounds at birth; the neonatal course was entirely normal. The baby was breast fed for two months, and it gained poorly, only about one pound and two ounces during this period, so it was changed to an evaporated milk mixture, which it was offered every three hours. It seemed to do better after this change; it subsequently, however, was increased to thirteen ounces of evaporated milk and sixteen ounces of water and five tablespoons of probably Karo syrup. This change also may have been because the baby did not gain properly. (We may have to use that information in coming to a conclusion about this case a little later.) The solid foods were taken well and it was given a multi-vitamin preparation. The developmental history was entirely normal but there were no immunizations given.

The present illness is interesting because the baby developed some catarrhal symptoms with nasal discharge three months prior to admission which persisted to the time of admission. Eleven days prior to admission the infant began to cough and the breathing became difficult. It was seen by a physician who found no fever and it was given some tablets which were said to be "resting pills." The baby seemed to improve over the next week. Four days prior to admission the cough became much more severe and it developed fever. The cough was so vigorous and exhausting that he became lifeless after the paroxysm; these paroxysms also were associated at times with vomiting. The infant was seen again by a physician who made a diagnosis of whooping cough. An X-ray of the chest showed some pneumonia. Three days prior to admission the baby was hospitalized in another city and was started on injections of penicillin every three hours. He failed to improve and accordingly was brought to this hospital. The cough became productive of a thick material and fever persisted. The coughing had become associated with perioral cyanosis.

The physical examination showed a baby who was acutely ill with very rapid pulse, rapid respirations and 101.6 temperature rectally. The baby weighed 14 pounds 12 ounces.

How much do you think a baby who was 8 months of age should weigh at this age?—

STUDENT: About 16 or 18 pounds.

DR. CHRISTIE: Yes, that's about right. We have reason to assume that in spite of the fact that this baby had a pretty good appetite and was on an adequate formula, for some reason or another he did not gain weight properly. I think this point falls under the heading of what I like to refer to as a presenting or leading sign or symptom. Certainly, we are going to have to take this into consideration in the solution of this case.

This acutely ill baby was cyanotic and with grunting respirations. The fontanel was open and slightly depressed; was thick, tenacious material in the nares and posterior pharynx. The mouth was dry, the lips were cracked and the pharynx was diffusely injected. The baby had a questionably stiff neck and there was some costochondral beading.

There were diffuse fine moist rales throughout both lung fields. The heart sounds were poorly heard for some reason or other and the borders could not be percussed. The remainder of the examination was within normal limits.

Now we come to the interesting laboratory findings which inevitably will be important to us in our final interpretation. The baby had 28,500 white cells with 70 per cent segmental forms and 25 per cent lymphocytes. The significance of that is clear to all of you, particularly in view of the last statement in the fourth line from the end of the protocol which I am sure most of you have read. It states: "Throat culture two days after admission—*H. pertussis*."

The X-rays showed bronchopneumonia throughout both lung fields; it was more marked on the right. In addition, the lung fields look a little emphysematous to me.

Now we must seek an explanation for this bronchopneumonia if we can. The baby was placed in oxygen and given some 5.0 cc. of pertussis hyperimmune serum. Somebody must have thought this baby had pertussis because this material is expensive. It was probably a human hyperimmune serum which is commercially available. The individuals from which the original blood was obtained are hyperimmunized. They are then given booster injections frequently. For your general information there are two other sources of hyperimmune pertussis serum. (It is an effective therapeutic procedure.) One is rabbit hyper-

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immune serum, the other lyophilized human serum which can be reconstituted. There are then three sources of hyperimmune pertussis serum which we use for passive immunity in small infants or for the treatment of severe whooping cough with complications. This baby was also given intramuscular penicillin and sulfadiazine. (I guess this dates the protocol; there is no other way of telling when the baby died but we have not used much sulfadiazine on our Pediatric Service for a long time except for the treatment of meningococcus meningitis or diarrheal disease.) The baby was given symptomatic treatment and it seemed to improve.

The fever subsided but it rose again on the sixth hospital day to 103.2°. The sulfadiazine was discontinued and the fever declined. The infant continued to have paroxysms of cough and rales persisted. On the tenth hospital day after having vomited with a coughing paroxysm the temperature spiked to 104.4°. This respiratory distress became much more marked. A lumbar puncture was performed, productive of clear fluid, with 8 mononuclear cells and 92 mg. of sugar and 15 mg. of protein. Because of the rapid pulse and respirations and the findings of the liver two finger breadths below the right costal margin the infant was digitalized. It was also started on streptomycin intramuscularly and by aerosol; this was continued for two days. The fever continued, reaching 106 to 106.8 on occasion. The chest remained full of rales.

The condition progressively deteriorated and the infant expired on the evening of the fifteenth hospital day. The laboratory work was essentially the same as reported above with a high white count but without lymphocytosis and the blood culture was sterile; the spinal fluid culture was sterile but there were pathogenic organisms in the culture of the nasal pharynx. These consisted of *H. influenzae* organisms and staphylococci. These were found in both the nasal and throat culture. Then, to throw the bombshell into my thinking, the fourth line from the last says that the throat culture two days after admission *Hemophilus pertussis* organisms were found. Tuberculin and histoplasmin skin tests were negative and the X-ray of the chest was essentially unchanged. The electrocardiogram showed a right axis deviation.

What do you think was wrong with this baby? What contributed to this baby's death?

I might say I have engaged in a study of the parents and grandparents of children who had pertussis. We found in a small percentage of these grandmothers, mothers and fathers of children to have an atypical cough which they thought to be cigarette coughs. Actually they were secondary attacks of whooping cough. As you remember, whooping cough confers a pretty good immunity but authentic second attacks have been found and so it was with some of these grandparents. I had a grandmother who died of proven whooping cough which she contracted from a child. Of course, there were some cardiovascular complications. Is there any way you could resolve these confusing bacteriologic findings? Is there any way we can resolve the finding of these bacteriologic facts and make them fit into the protocol in any way that will make sense?

What I was thinking of, in my efforts to resolve this difference of opinion or this confusing bacteriologic situation, was that *Hemophilus influenzae* organisms and *Hemophilus pertussis* organisms are both small gram-negative organisms. It was attractive to me to wonder whether or not they could have become confused. Our bacteriology was undoubtedly supervised at this time by my colleague, Dr. J. Cyril Peterson, who knew as much as anybody in the country about the *Hemophilus pertussis* organisms as well as the *H. influenzae* organism and it is unlikely that he would fall into a trap like this. It says here in the protocol that *H. pertussis* organisms were found, and I think we have to accept it on that basis. The finding of the staphylococci which are so very common in mucoviscidosis would be, I think, additional evidence to support the impression and resolve the confusing bacteriology. Staphylococcus is quite ubiquitous; we don't know if this one is pathogenic from this information.

I must say that I read this case with a

great deal of concern because, until I got down to the next to the fourth line from the end, I thought I knew what was wrong with this child. I thought it was mucoviscidosis for the reasons you have heard again and again. In children under one year of age who fail to thrive, who do not gain weight on a normal diet, we inevitably think of several things. We think of congenital kidney defects, so we request an N.P.N. We do not have this information but we do think of congenital defects of the heart, of the urinary tract, and we think then of mucoviscidosis. In mucoviscidosis the history is one of an excellent appetite, failure to thrive, usually with diarrhea or foul stools, sometimes described in picturesque terms by mothers, but nevertheless foul, stinking and sometimes smelling of cod liver oil when cod liver oil is given. The other thing about mucoviscidosis, particularly in small children, is that they have recurrent respiratory infections. This is very, very common and is outstanding in the story in mucoviscidosis. The respiratory infections take two forms. One is to suggest asthma or spasmodic bronchitis. At least there is a wheezing element to the bronchitis. Spasmodic bronchitis and an imitation of pertussis, we have found to be extremely common. We have been fooled on this so many times that we seldom make this mistake any more. The other type of respiratory infection presented is an imitation of pertussis. We have children who have mucoviscidosis and cough in paroxysms, who turn blue and who have much respiratory distress and recurrent infection, and this is why I thought that this was certainly a case of mucoviscidosis.

Now, how about pertussis, which is the other diagnosis I believe we have to consider. Well, the family history is of no help to us. Perhaps if we look at it another way, this baby did not do so very badly. We don't know what the parents looked like; we don't know the constitutional factors which might not have allowed it to gain as well as it otherwise might have. And it may be that this baby, at 14 pounds and 8 ounces at 8 months of age, is not so terribly off the grid as it might seem on the surface. If you think of one and a half pounds a month for the first five or six months as being a normal gain, that would take it up to well above say 16 or 17 pounds. And we do not know how much it lost during this illness. We haven't any stool history and the bacteriology is quite conclusive, it seems to me. Would anyone else like to venture a diagnosis on this baby? We have aspiration pneumonia, we have pertussis, we have a possibility of mucoviscidosis. What other possibilities would you like to entertain?

I am supposed to make a diagnosis, and I think I will accept the protocol as given. The baby had pertussis. I cannot explain the laboratory work. It is inconsistent with that. The clinical course is entirely consistent with pertussis. The catarrhal stage of some week or two, followed by paroxysms of coughing, are certainly typical of whooping cough, and the complications of whooping cough are also represented in this protocol. These are most commonly pneumonia, and the pneumonia is an interstitial pneumonia. It is consistent with X-rays which lack much consolidation, I think. The other complication of whooping cough is encephalopathy. So something must have been present in this baby to make the staff want to do a spinal puncture. So we have a pretty good story for the onset and we have a pretty good story for the course, and we have the bacteriologic findings to tie it up. We have two complications suggestive of whooping cough which are present on our protocol. I think I would have to stand there. Certainly, the diagnosis of mucoviscidosis, that is pancreatic insufficiency, is attractive, and we may very well be wrong in our diagnosis of whooping cough. If we are, then it illustrates in a very dramatic way the point that I made before. If you see a typical whoop in babies who fail to thrive, with asthmatic components, and who have some evidence of gastroenteritis, they are likely to have mucoviscidosis.

Anatomic Diagnoses

Fibrocystic disease of pancreas (mucoviscidosis);
Bronchopneumonia and bronchiectasis;
Fatty degeneration of the liver.

DR. JOHN L. SHAPIRO: I'm inclined to

agree with Dr. Christie that there must have been a bacteriological mix-up on this particular organism and that the organism diagnosed as *H. pertussis* was, in fact, *H. influenzae*, as was originally isolated. We were unable to isolate any pertussis organisms by culture and did not find the organism in the characteristic location in the cilia of the respiratory tract epithelium. We could not make a diagnosis of pertussis in this case. The gross findings on this autopsy were extremely significant and almost diagnostic, I believe. At autopsy there was a great deal of change in the lung consisting of focal consolidations throughout the whole right lung and throughout the left lower lung. This was a very impressive process, and tended to be nodular, and one got the impression that this was centered about the bronchi. It was thought the bronchi were somewhat dilated and a little longer than normal, consistent with bronchiectatic change. This localization of consolidation around the bronchi was of significance as far as the diagnosis was concerned. It was possible to express pus from the distended bronchi—a purulent type of bronchitis. Most of the autopsy findings were really not very remarkable grossly. There was no definite gross change in the pancreas. It was thought to be a little large and it was felt to be a little firmer than usual, with a decreased mobility of the lobules one on the other. The contents of the gastrointestinal tract were thought to be bile-stained, and were considered to be flaky, though certainly not bulky, with nothing to suggest grossly the changes of celiac disease.

The microscopic sections reveal diffuse fibrosis of the pancreas; it is evident that the usual glandular elements are not present. There are epithelial-lined ducts with few pancreatic acini around them embedded in a matrix of fibrous connective tissue. Sometimes normal appearing islets persist in such a pancreas, though the acinar structures are completely gone. This is the picture of cystic fibrosis of the pancreas, as postulated in the discussion. The ducts are dilated and there is inspissated secretion within these dilated lumens. It is quite characteristic to see the eosinophilic secretion within the distended ducts.

Examination of the lungs reveals the unique pulmonary lesion of fibrocystic disease of the pancreas. Tremendous amounts of purulent exudate in the distended bronchi and variable amounts of surrounding pneumonitis are seen in this case. In some areas there was extension of the process out from the bronchus and a very marked degree of bronchopneumonia. This was most likely a terminal manifestation. This localization of pus within the distended bronchi is not specific, but very suggestive of fibrocystic disease of the pancreas. In this case in some bronchi we saw evidence of squamous metaplasia. A moderate number of emphysematous blebs were seen on gross examination. These were apparently due to partial obstruction of the bronchi by exudate. If the obstruction is complete then the picture of atelectasis is seen.

Another finding of significance in this case was the presence of a fatty liver. A fatty metamorphosis of the liver is present in a fairly high proportion of cases of fibrocystic disease of the pancreas. The exact mechanism is not known, except that it has been attributed by some individuals to a lack of the lipotropic agent secreted by the normal pancreas.

The question of pathogenesis always must be considered, and as we did in this particular case, at the time of autopsy. In examining this case I was unable to satisfy myself that the mucus-secreting glands elsewhere than in the pancreas,—for example those in the duodenum, in the gall bladder, or in the trachea,—were abnormal. I could not find any definite evidence that these showed the same type of blockage that we see in the pancreas. This, of course, adds nothing to Dr. Faber's contention that this disease is really a generalized abnormality in the secretions of various glands throughout the body and that a viscid inspissated type of secretion results with obstruction. We cannot deny that nor substantiate it on the basis of the findings in this case. You are familiar with other theories, I am sure. The lack of vitamin A is a possibility. In this case as in many others we did not see much in the way of squamous metaplasia, a classical finding in the association with vitamin A deficiency. I think it would not

From the Executive Secretary

ORGANIZATIONAL NEWS

Fourth Conference in Coal Mine Area Held On May 6th

● The Fourth Conference on Medical Care in the Bituminous Coal Mine area, sponsored by the AMA Committee on Medical Care for Industrial workers, was held at the Daniel Boone Hotel in Charleston, West Virginia, on Sunday, May 6th. The objective of the conference was to develop better liaison between State Medical Associations and UMWA administrators for the amicable resolution of mutual problems steming from the desire to improve the quality of medical care in the Bituminous Coal Mine Areas.

T.S.M.A. President Attended

● The Conference, which was presided over by Dr. William A. Sawyer of Rochester, New York, heard reports from five active medical association liaison committee chairmen. The states reporting were: Tennessee, Kentucky, Pennsylvania, Virginia and West Virginia. The reports dealt with methods by which liaison between medical societies and the miners union is maintained, current problems in these relationships, areas of disagreement and suggested solutions to existing problems. Tennessee's report was given by the President of the State Association, Dr. R. B. Wood. Other members of the TSMA attending the Conference were: Dr. B. M. Overholt, Knoxville; Dr. Geo. S. Mahon, Knoxville; Dr. F. L. Roberts, Memphis; and Dr. John Winebrenner, Knoxville. The Executive Secretary was also present. More than 100 doctors from the five states were on hand to discuss the many issues presented to the conference.

AMA Public Opinion Survey Widely Publicized

● It's been widely publicized already, but the recent AMA public opinion survey made "in order to find out what might be needed to improve doctors' services" brought some very interesting conclusions which might be considered by county medical societies in planning for the future. Following is a very brief summary of the findings:

"From (the survey) emerged a picture of what people like about and expect from their doctors: Sympathy, patience, and understanding, rather than guaranteed cures and 'wonder drugs.' . . .

"Major items shown by the survey are: (1) Most Americans have their own family doctor; (2) Most of them like him, and like doctors as a group; (3) People's opinions gained from their own experience differ from those based on hearsay or other sources; (4) Doctors are more critical of themselves than other people are of them; (5) When people criticize physicians, it is largely for the cost of care; they do not, however, think doctors are trying to 'get rich quick'; and (6) They are evenly split for and against 'sliding scales' of fees."

The poll was conducted among a very carefully selected sample of 4,000 persons.

New Directory

● After twenty months of work the 19th edition of the American Medical Directory has been completed and the first copies should now be reaching subscribers. The new edition contains 3,122 pages and lists information on 240,638 physicians in the United States, its dependencies and Canada.

Since the 1950 Directory, more than 250,000 changes of address have been recorded in the files of the Directory-Biographical Department of AMA. 46,348 names have been added and 24,225 have been deleted because of death, with an additional 1,172 deleted for other reasons.

TSMA Legal Liaison Committee Meets

● The Legal Liaison Committee to the Tennessee State Bar Association met in Nashville with members of the Bar, for the purpose of adopting a Code of Cooperation for lawyers and doctors. The meeting was held in the headquarters office building of the State Medical Association on Sunday, May 20th. The Conference was presided over by Dr. Geo. K. Carpenter, Chairman, who led the discussion. Members of the Liaison Committee as well as representatives from the Bar Association have felt for some time that such a Code of Cooperation was needed. Many aspects of the relationship of doctors and lawyers are highly important, especially in view of increased numbers of court cases.

When the Code is finally written and approved by the Committee, the document will be presented to the House of Delegates of the State Medical Association and to the official body of the Bar Association for ratification.

County Society Officers Conference

● As the result of a Resolution passed by the House of Delegates in 1956, the Tennessee State Medical Association will conduct its first official county society officers conference during the fall.

September 23rd Picked As Date

● Sunday, September 23rd has been selected as the date for holding the Conference. It will be conducted in Nashville with the President of the TSMA presiding. It is planned to hold the conference to a minimum amount of time. The program will be filled with material of significance and importance to officers of the county medical societies.

September 23rd is the day following a Saturday night football game between Vanderbilt and the University of Georgia, and it is hoped that physicians might take the opportunity to attend a good football game on the evening before the conference is conducted on the following morning. It is planned to hold the conference at 10:00 A.M. and limit the program to not more than four hours. More details will be forthcoming at such time the program is completed.

A Few of the Ways That TSMA Serves You

● ADVISES and counsels officers and members of each component county society.
EDITS and publishes a monthly journal for the entire membership.
CONDUCTS postgraduate education programs for all members.
ASSISTS the legislative, executive and judicial branches of government on medical and health problems.
LENDS assistance which consists of requested reprints, tearsheets and other periodical material as a service to members.
MANAGES a convention to conduct business, discuss latest medical advances and disseminate information on new methods and techniques.
UNITES with voluntary and official health agencies in the constant war against illness.
SPONSORS health education activities through the distribution of pamphlets, films, health columns and radio platters.
OFFERS insurance programs in Disability, Malpractice and Liability plans for the membership.
SPONSORS a large and successful Surgical Insurance Plan (The Tennessee Plan).
ACTS as the voice of medicine in the State, representing 2500 doctor members in many matters of importance.

Public Service

THE TENNESSEE TEN

Mrs. Mary Jane Kohrs Is New TSMA Staff Member, Succeeds Miss Margaret Rawls



Mrs. Kohrs with Public Service Booth

● Shown here is Mrs. Mary Jane Kohrs, who succeeded Miss Margaret Rawls as Public Service Secretary for the TSMA staff. Miss Rawls is now with the Nashville Chapter of the National Polio Foundation.

The picture was made of the Public Service Booth at the annual TSMA meeting April 8-11 in Memphis. The booth highlighted public service program aims and pointed to accomplishments in press, radio and television relations, auxiliary public service, the health project contest, Medical Education Week, the Tennessee Medical Press Award, and many other endeavors.

Mrs. Kohrs is a native of Michigan. She received her Bachelor of Arts from Vanderbilt University in 1952 and was employed at the University before coming with the TSMA. Her husband is Edward J. Kohrs, a Vanderbilt law student.

AMA President Praises Indigent Program

● Tennessee's Indigent Hospital Program was praised by the President of the American Medical Association who spoke May 22 to 450 doctors from the Memphis area.

Before his 7:30 talk at the Claridge Hotel as the guest of the Memphis and Shelby County Medical Society, Dr. Elmer Hess of Erie, Pa., commended Tennessee doctors on a 4:20 p.m. telecast over CBS station WREC-TV.

"You should be proud of your doctors for donating their services to patients admitted to hospitals under the indigent plan," the AMA president said.

"You have a good plan whereby your counties match funds with state appropriations to make it possible for people without money to have hospital care anyway, when they need it," he continued.

"You can't do the job, though, with only a few thousand dollars a year. It will take more than a million dollars a year to repay your hospitals for their losses," Dr. Hess added.

Citizen First

● Dr. Hess' speech at the Claridge climaxed a four-day visit to Memphis. He told the group that the doctor must be a citizen first.

"It is your duty to register and vote in every election. Unless you do, the America that you and I know will be slowly strangled to death," he concluded.

Motion Picture on Indigent Program

● A thirteen-minute sound motion picture for television is being produced by the Public Service Committee to explain how Tennessee's indigent hospital service program works and to encourage all counties to vote to participate in the plan.

A larger state appropriation for the program is desperately needed in order to keep our hospitals solvent and to insure that people without money can get prompt hospital care when they need it. Public understanding of the program will result in public support.

Public Chapter 125 has limped along so far on a token appropriation. This program has consistently had the backing of State and County government, Tennessee doctors, and representatives in the Legislature. However, the present appropriation, amounting to $150,000 each year from the State with an additional forty per cent from participating counties, does not meet the great need. At a conservative estimate, at least $2,000,000 each year, made up out of joint state-county appropriations, is required to adequately finance the program.

Tennessee Program Compared to Other States

● By comparison with the laws concerning indigent hospital care now in force in other states, there can be no question that Tennessee's is the superior law. Administration of funds and determination of indigency, for example, are handled with equity, efficiency, and speed by a local county screening committee made up of a reputable physician, a representative of the county court, and a public spirited citizen.

By further comparison, however, Tennessee's program is woefully short on appropriations. Mississippi, with a population by 1950 census of a million less persons than this state, appropriates $1,500,000 annually for an indigent hospital service program. Florida, also less populous than our state by nearly a million persons, recently appropriated $500,000 to pay the hospital bills of her indigent sick over a period of eighteen months. Thus the Tennessee appropriation of $150,000 is readily recognized as token and inadequate in the extreme.

It only remains for the people of Tennessee to understand that tax dollars spent to insure higher standards of health and continued support for our invaluable hospitals are dollars wisely spent.

Purpose of Motion Picture

● The purpose of our motion picture, "Battle Against Death," is to carry this dramatic message to the people in a form they can understand and appreciate.

be right to go to that as the etiologic factor. Another possibility that is raised from time to time, and is a matter of some interest, is the possibility that this condition in the pancreas represents the results of a viral infection inasmuch as in certain instances of this disease inclusion bodies have been reported. However, over-all it is doubtful that inclusion bodies in the form of cytomegalic inclusion disease are present in association with these cases more than in the population at large. It is of some interest to point out that in the original case of cytomegalic inclusion disease that was described by Dr. Goodpasture in this laboratory that one of these patients did have fibrocystic disease of the pancreas.

DR. CHRISTIE: Dr. Shapiro, there is still another theory that has been attractive. It relates to the size of the ducts,—the obstructive theory. And then there are other theories that come up. Stenosis of the pancreatic duct has been proposed. There is much to support that theory when one looks at the dilated duct system of the pancreas in this condition. On the other hand one cannot help but be impressed by Dr. Farber's theory of abnormally viscid secretions playing a major part in this disease and that this is the result of disease in all the glandular tissues of the body.

We might be excused for not doing a vitamin A test here, or passing duodenal tubes as we do now, especially if we suspect mucoviscidosis. There are other tests for this disease which have been developed. We are now using a lipiodol test. This test is simple. A urine specimen is collected and tested for iodine after the ingestion of lipiodol. This is done with simple reagents and is a very effective screening device and has a high correlation of accuracy. Still another test is a sweat test which has been developed in Boston by Dr. Schwachman which is also quite simple. It is based on excessive sodium which these children excrete from their skin.

For the sophomore class, mucoviscidosis is a very common disease in our experience, and we must have 75 or 100 of these children in our active file. We are seldom, if ever, without a case or cases on our wards and you will all see many more of them. We are always thinking of it in children who are failing to thrive, ruling it in and out. Another test which I guess was alluded to was the search for trypsin in the stool. There are some fallacies about this, such as proteolytic organisms which digest the gelatin from the X-ray film but negative tests are very significant. When there is no trypsin, there is no digestion of the gelatin on X-ray paper. The presumptive diagnosis, therefore, is fairly easy. The prognosis in this condition is not good, but it is not altogether bad. These children, with antibiotic therapy, keeping after the resistant organisms, a high protein diet, water soluble vitamins and granules of pancreatic substance which have been coated with salol to prevent their digestion in the stomach, are all means by which these children can be carried on indefinitely but with more or less respiratory crippling, without the course that you have seen here today.

I have been interested over a period of time in finding a counterpart of this condition in adults. I think the disease has been reported in adults. But we have never been able to find anything that I thought was fibrocystic disease of the pancreas in an adult.

President's Letter

TENNESSEE'S INDIGENT PROGRAM



Dr. Wood

In 1951 the General Assembly of Tennessee, at the urging of the Tennessee State Medical Association and with the consent of Governor Clement, passed a resolution which called for the establishment of a Study Commission on Indigent Hospitalization. This report was delivered in October, 1952, with the recommendation for the establishment of a program for hospitalization of persons unable to meet the costs of their illness. The program for hospitalization costs was to be financed by the State and County governments and the medical profession volunteered to treat these indigents without remuneration.

According to the Act, the program is "designed to pay the cost of hospitalization of those residents of the State who are ill, or injured and who can be helped markedly by treatment. . . ." It is not intended for domiciliary care. Each county participating appropriates its local funds, sets up its own screening committee to pass on the eligibility of its own applicants. In other words, as Governor Clement has stated: "This program requires community action, community leadership, community control and is designed to tie together three very important local groups—medical, hospital and county quarterly courts, all united and working for the unfortunate."

At this time eighty-four counties, which constitute 95% of the total population of the State, are participating in the program. It is not surprising to see in the '54-'55 Annual report, issued by the Public Health Department, that twenty-nine counties expended 90% or more of their available funds and twenty-three counties expended their total amount. This is less surprising when we note that in some instances only sufficient money was available in some counties to defray the expenses of only 1 or 2 patients. However, fifteen counties spent only one-half of their appropriation. For the State as a whole, 68.5% of the net funds were used in the first year of operation. (For details, read the annual report of the Indigent Hospital Program of '54-'55 by the Tennessee Department of Public Health.)

Of undetermined impact on this program is a recent opinion of the Solicitor General of Tennessee in reference to hospitalization of indigent persons suffering from malignant disease. In his opinion as to their eligibility for participation in this fund, he calls attention to a part of Section 14-701 of the Act which reads "Medically indigent person means a person who is a resident of the State and who is ill or injured and who can be helped markedly by treatment in a hospital and who is unable to provide himself with the necessary services as prescribed and ordered by a physician." This we believe would limit authorized treatment to those susceptible of remedial benefit and would prohibit prolonged hospitalization for incurables.

This possibly created situation plus the increasing utilization incident to wider knowledge of the existence of the program, bring the realization to our profession of at least three important facts that must be met:

1. That the profession in each county must have representation on the screening committee of their respective communities.
2. That the profession must help in establishing sufficient funds through their county courts to meet the demands of the indigent program.
3. That after acquainting ourselves with the provisions of the Act, that we inform our Senators and Legislators of these provisions and call their attention to the fact that Tennessee lags far behind other states in providing funds for indigent care. For instance, as brought out in "Confidential" Tennessee had for its first 2 years of operation only $75,000 per annum and $150,000 per annum for the second biennium. The State of Mississippi with a popula-

(Continued on page 217)

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JUNE, 1956

EDITORIAL

IS INSULIN TO BE OUTMODED?

Recently two sulfonamide derivatives which have been released for clinical trial have prompted the above query. They are B-Z, 44 Carbutamide (N-Sulfa-Nilyl-N'-N-butylurea) distributed by Eli Lilly Company and Orinase, distributed by the Upjohn Company.

The background for the release is an interesting story. In 1941 to 1946, various sulfonamide derivatives were studied in Germany for their blood sugar lowering properties, since it was observed that hypoglycemia occurred when these preparations were given by mouth to normal animals or humans.

Fuchs[1] tried this new sulfonamide on himself, being primarily interested in the antibacterial properties. However, he noted the occurrence of fatigue, trembling, perspiration and hunger in association with the development of hypoglycemia. This hypoglycemia occurred within 2 to 3 hours after the administration of the compound, and the blood sugar returned to its previous level about six hours after the drug was discontinued. Other investigators[2] had noted a peculiar somnolent condition associated with hypoglycemia in patients being tried on certain other sulfonamide compounds. However, in the early phases of this investigation the frequent occurrence of liver damage in the experimental animal following administration of these drugs, particularly Synthalin-A, made its use clinically inadvisable. The use in the diabetic was consequently withdrawn.

The two newer compounds, Carbutamide and Orinase, mentioned above have proven safe in the experimental animal, and have been tried clinically in the human quite generally in Germany and to a lesser extent in this country.

The group of diabetics in whom the drug seems to have the best effect consists of those patients whose diabetes is classified as maturity in onset, that is, occurring in a person over age 50, of relatively mild severity and of short duration, and whose insulin requirements have been relatively low. It should not be tried in the young, "brittle" or unstable diabetic or in those with acidosis or vascular complications. The drug is not too effectual when given by vein and should be given orally either as a single allotment or in divided doses throughout the day. The first day 2.5 grams are given, the second 1.5, and thereafter 1.0 to 2.0 grams as indicated. Careful checks on liver function, white blood cell counts, and inspection of the skin for rashes are made frequently. The drug is stopped if any of such abnormalities are noted. The beneficial effect on the blood sugar is noted promptly and is constant, and no tolerance to the drug has been observed. A variable antibacterial blood level is maintained.

Although the mode of action is not certain, it is supposedly related to a reduction in the rate of destruction of insulin in the

[1]Franke, H., and Fuchs, J.: A New Antidiabetic Principle, Deutsche med. Wchnschr. 80:1449, 1955.

[2]Achelis, J. D., and Hardebeck, K.: A New Hypoglycemic Substance, Idem. 80:40, 1455, 1955.

organism, therefore, making the currently available endogenous or exogenous insulin relatively more effective. This action seems to be related to an effect of the new compound on the alpha cells of the pancreas, the source of glucagon, the hyperglycemic-insulin-antagonist factor. The beta cells which produce insulin are not altered. Experimentally the histologic examination of the alpha cells reveals definite changes, while the beta cells seem to be unaltered. In addition, experimentally the drug does not act in the totally depancreatectomized animal or in the alloxan-induced type of diabetes.

The hypoglycemic effect is, therefore, due to an increase in the effectiveness of the available insulin and not the Carbutamide primarily.

One can conclude that these sulfonamide preparations are safe, although their use should be started under controlled hospital supervision, and regular follow-up supervision should be strictly enforced.

It seems clear that a definite number of diabetics will be managed by this new drug, and it is quite possible that this is only the beginning of the investigation into a new method of treatment of diabetics. This may answer the prayer of many diabetics,—namely, the relief from the daily use of the hypodermic needle. This development will be watched with great interest.

Inasmuch as hypoglycemia is a side-effect of sulfonamide activity, it should be mentioned that another side effect is found in Diamox (2 acetylamino-1,3,4, thiadiazol-5-sulfonamide). This substance has a specific carbonic anhydrase inhibition in the animal and human organism, especially in the kidneys, erythrocytes, gastric mucosa and other tissues. Its resultant diuretic effect particularly, and its beneficial effect in glaucoma, have made it an agent of popular benefit. If sulfonamide side-effects can vary from diuresis to hypoglycemia, it suggests that many other equally divergent uses may be found in the future. A. W.

MEDICAL ASPECTS OF CIVIL DEFENSE

Though Civil Defense has been a subject in the public eye for some years, interest in it has been variable and geographic. It seems that the public of the seaboard states, especially of the west and east, has had more interest in this matter than the areas of the interior. Knowing that the great cities of the coastal areas might be primary targets, this greater interest is understandable, though urban centers such as Chicago, Detroit and Pittsburgh with their strategic industries and railroad connections would also be primary targets for trans-arctic bombers.

Geographic location thus accounts for the relative apathy in Civil Defense activities in our area. It seems likely that the current overtures of friendliness by the Russians toward the West, and the propaganda value of flushing the home Augean stables in that country will increase this apathy. An "it can't happen here" attitude is a luxury that must be postponed to the days of true international disarmament.

From general reading, it seems that organization of the public, the American Red Cross and the armed forces for defense have been, with some exceptions, more enthusiastic than of the medical and nursing professions. Dentists have shown a greater interest in these activities.

Organizations stimulating continuing activity and interest in the profession's part in Civil Defense are the Health Office of the Federal Civil Defense Administration, the Committee on Civil Defense of the Council of National Defense, American Medical Association, The U.S. Public Health Service and committees of state and local medical societies. Medical students are learning of these activities through the Medical Education for National Defense.

The Third Annual National Medical Civil Defense Conference, held at Atlantic City in June, 1955, pointed up the many aspects of Civil Defense and especially those related to medical care and the medical profession. A series of papers presented at this Conference appears in the J.A.M.A., the April 7 issue of this year. From these one learns what has been done, what is being done, and what is needed.

The whole pattern of civil defense as planned at first has been altered by the development of the thermonuclear bomb and the subsequent radioactive fall-out. No longer is the pattern of scattered medical

units in and around a city practicable. Rather the primary motive in civilian defense will be as much dispersion of the population, and as widely, as possible. Even after the major destruction of a city by thermonuclear bombs, dispersion will be imperative to reduce exposure to radioactive fall-out. The evacuation of the urban populations is a problem of the nonmedical organizations of the civil defense team. The safety of any given zone or area is the duty of the radiologic defense group. (California has trained 450 instructors who have trained about 6,000 monitors.[1]) The treatment of the casualties is the duty of the medical, nursing and dental professions.

In thermonuclear warfare it is quite obvious that the local medical facilities of the target urban arena are not to be considered. Even if they should be far enough from Ground Zero point to escape destruction, they would be untenable because of radioactive contamination. Thus medical care must come from the periphery, moving toward the bombed area but within a safe area in terms of dangerous radioactive fall-out. To meet this problem Improvised Hospitals have been developed (shown at the 1955 meeting of the American Medical Association) and some 200 have been "stockpiled." It is estimated that 6,000 are needed, with the necessary supplies to care for a casualty volume of 3,500,000 persons. These are to be stored in areas adjacent to critical target areas. Of course the manning of these hospitals is the duty of the medical, nursing and dental professions, and organization-wise the duty of the state and local medical societies.

The Harris County Medical Society, Houston, Texas, has made a notable trial of mobile support for civil defense.[2, 3] Four Houston hospitals loaned $250,000 worth of equipment providing thereby a mobile X-ray unit, mobile pharmacy, blood bank, sterilization equipment, etc. Local civil defense organizations provided loans of laundry trucks, vans, etc., for transportation and to act as ambulances in the target area. Personnel involved were 31 physicians, 33 nurses and 63 medical technicians. Four equivalent persons were assigned to each place to provide for substitutes for those not available at the emergency alert. Two hundred medical students were used in various capacities.

In the trial operation, Beaumont, Texas, 90 miles from Houston was used as the target city. Within an hour of an unannounced alert between 400 and 500 persons were at the assembly point. In about three hours from the alert, the advance party arrived at the sorting station site in Beaumont. Within nine and a half hours from the alert in Houston, 250 "casualties," distributed as to types and numbers expected in a nuclear blast, in Beaumont had been handled and the orders to pack up had been given.

From this trial those who organized the Harris County Medical Society operation feel that this type of mobile aid is practical for a target area up to 250 miles distant.

The officers of medical societies, the members of committees on civil defense, and others will find the papers in the J.A.M.A., April 7, of interest.

R. H. K.

[1]Warren, S. L., and Stein, Justin J.: Radiological Defense in California, J.A.M.A. 160:1215, 1956.

[2]Olsen, S. W., Schofield, J. R., Howard, J. M., and Shearer T. P.: Mobile Medical Support for Civil Defense: I. Field Trial J.A.M.A. 160:1202, 1956.

[3]Howard, J. M., Butler, D. B., Olson, S. W., and Schofield J. R.: Mobile Medical Support for Civil Defense: II. Treatment of Mass Casualties, J.A.M.A. 160:1211, 1956.

SPECIAL ITEM

MEMORANDUM FROM THE STATE OF TENNESSEE DEPARTMENT OF PUBLIC HEALTH, MAY 23, 1956.

TO: Physician Members of the County Screening Committee

SUBJECT: Eligibility of Certain Cancer Cases for Hospitalization under the "Hospital Service for the Indigent" Program

With further reference to my letter of March 20, 1956, transmitting the Attorney General's opinion relating to certain cancer beneficiaries for hospitalization under the Hospital Service for the Indigent program, I am appealing to you and other physicians in your county to use your influence in first referring medically indigent suspect cancer cases to the diagnostic tumor clinics before authorizing hospitalization under the Hospital Service for the Indigent program. I also wish to call your particular attention to Section 1 and Section 17 of Public Chapter No. 125, House Bill No. 905 creating this Act.

Your excellent leadership in serving on the Screening Committee is very much appreciated

and has already proven to be an outstanding service to the public and medical profession.

Sincerely yours,
R. H. HUTCHESON, M.D.
Commissioner

EDITOR'S COMMENT: *All members of the Association having occasion to seek aid for indigent cancer patients should refer to the section on Announcements in this issue, and file this issue or at least those pages for future reference and instruction.*

DEATHS

Dr. F. D. Owings, 48, Johnson City, died March 6th at his home.

Dr. Carl W. Brabson, 77, Jonesboro, died April 3rd at the Mountain Home Veterans Hospital in Johnson City.

Dr. Fred L. Webb, 83, Nashville, died March 26th at Vanderbilt University Hospital.

Dr. Thomas E. Miller, Memphis, formerly of Ripley, died March 15th in Memphis. He was 82.

Dr. William David Sumpter, Sr., 83, Nashville, died March 31st at his home. He had been in practice for 62 years.

Dr. Richard Alexander Barr, 83, Gallatin, died April 4th at his home.

Dr. Arthur Porter Harrison, 63, Loudon, died March 31st at Fort Sanders Hospital in Knoxville. He had suffered a heart attack.

Dr. Emmett E. Byrd, 65, Johnson City, died April 23rd in Memorial Hospital. He was the director of the Washington County Health Department.

Dr. J. B. Stephens, 69, Henderson, died April 24th at a Rest Home in Water Valley, Mississippi.

Dr. Robert Horace Miller, 77, Nashville, died April 27th as a result of a heart attack. Dr. Miller was former Associate Dean of the University of Tennessee Medical School at Memphis and immediately preceding his death, was Professor of Anatomy at Meharry Medical School.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga and Hamilton County Medical Society

At its meeting on April 5, the scientific program consisted of papers entitled "Vaginitis," by Dr. Robert G. Demos, "Surgical Lesions Gastro-Esophageal Junction," by Dr. Foster Hampton, and a case report by Dr. Stewart Lawwill, Jr.

From April 30 through May 3, members of the Society were invited to attend the sessions of the International College of Surgeons meeting in Chattanooga.

At a dinner meeting on May 3 Dr. John deJ. Pemberton of the Mayo Clinic was the principle speaker, his subject being "Nodules of the Thyroid Gland, Their Significance and Treatment."

The Society held its annual outing and barbecue on May 17 at the Chattanooga Rod and Gun Club.

Warren County Medical Society

The Society met on April 20 in Clara's Restaurant where the program consisted of reports on the annual meeting of the Tennessee State Medical Association. Reporting on the convention activities were Dr. C. M. Clark, Jr. and Dr. C. E. Peery, Jr.

Roane County Medical Society

The Society conducted its regular meeting on March 27 in the Oak Ridge Hospital. The scientific program consisted of a closed circuit T. V. program on "Acute Abdominal Problems," presented by Upjohn Company and made at Tufts College.

At its meeting on April 24, Dr. Jack Chesney, Knoxville, presented a paper entitled "A Study of Mortality in Childhood."

Nashville Academy of Medicine and Davidson County Medical Society

Members of the Academy were the guests of Dr. O. S. Hauk at Central State Hospital for the April meeting. Following dinner, the scientific program consisted of a paper entitled "Experiences with the Use of Some of the Newer Drugs in Treatment of Mental Disorders," by Drs. A. Lawrence White and Robert Larrick of the Hospital Staff.

On March 23, members of the Academy heard Dr. Thomas A. Dooley, a Navy Medical Officer, tell of his experiences during evacuation of free Vietnamese to the non-Communist sector of Indochina. The meeting was held in Hotel Hermitage in Nashville.

At a dinner meeting on May 15 at St. Thomas Hospital the program consisted of papers on "Skin Plaining in the Treatment of Acne Scars" by Dr. Bernard J. Pass; "Modern Surgical Approach to Carcinoma of the Left Colon" by Dr. William R. Cate.

Jr., and "Intestinal Obstruction" by Dr. George Duncan.

Knoxville Academy of Medicine

At its meeting of April 17, Dr. J. B. Ely discussed "Isotopes in Private Practice and Diagnosis." Discussion was by Doctors Frank Turney, Wade Boswell and J. E. Acker.

On May 8 the scientific program consisted of a Case Report by Dr. J. Gilbert Eblen, and a paper by the guest speaker, Dr. R. H. Flocks, Professor and Head of the Department of Urology at the State University of Iowa, Iowa City, Iowa. His subject was, "Some Aspects of the Management of Patients with Benign Prostatic Hypertrophy."

Robertson County Medical Society

The Society met on May 18 at the Jesse Jones Hospital. Dr. Morse Kochtitzky of Nashville presented an interesting paper on the several types of anemia and the treatment.

Consolidated Medical Assembly

The Society held its regular meeting on April 3 in the New Southern Hotel in Jackson. Dr. R. R. Braund, Memphis, Director of the West Tennessee Research Clinic, addressed the assembly. His subject was "Tumors of the Gastrointestinal Tract—a Survey of Seventy Years of Progress." Dr. George Dodson, Jackson, led the discussion of the paper.

The Society met in the New Southern Hotel on May 1 for a dinner meeting and to hear several reports. A paper entitled "Surgical Emergencies in Gynecology" was given by Dr. Swan Burrus, Jr. This was discussed by Dr. George Dodson. Dr. Jack Armstrong spoke on "Clinical Discussion of Intramuscular Trypsin."

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met in regular session with the staff of the U. S. Naval Hospital at Millington on March 6.

The scientific program was given by the Medical Officers of the Hospital and was as follows: (1) "Total Reconstruction of the Nose with Case Reports" by Captain O. W. Wickstrom, discussed by Drs. McCarthy DeMere and Milton Adams; (2) "Carcinoma of the Fallopian Tube with a Case Report" by Captain J. P. Long, Pathologic report by Lieutenant Richard H. Walker, and discussed by Dr. John Q. Adams; (3) "Massive Venus Occlusion with Gangrene in a Newborn Child with a Case Report" by LCDR Wm. D. Dunavant, discussed by Rear Admiral Morton J. Tendler. The meeting was followed by a social hour and a dinner.

Sullivan-Johnson County Medical Society

The meeting of the Society was held at the Kingsport Inn on April 5. The Society was addressed by Dr. William Scott, of Vanderbilt University Medical School, on "The Management of Arterial Aneurysms and Occlusions."

Henry County Medical Society

The Society met on March 13 in conjunction with the symposium postgraduate education program presented by the Tennessee State Medical Association. The discussion on "Jaundice" was presented in the private dining room of the Avalon Restaurant, Paris. The essayists presenting the program were Dr. Harrison Shull and Dr. William R. Cate of Nashville and Dr. Alva B. Weir of Memphis.

Upper Cumberland Medical Society

The annual meeting of the Upper Cumberland Medical Society will meet at Red Boiling Springs, June 26-27, 1956. For any further details, contact Dr. L. M. Freeman, Granville, Tennessee.

Doctors Days

"Doctors Days" have achieved popularity and a number of such events were held in medical societies and many localities throughout the state recently. Doctors Day was observed in Cleveland on March 30. The event was sponsored by the Woman's Auxiliary of Bradley County Medical Society and a proclamation was issued by the Mayor.

Another such event was conducted in Madisonville on March 30. A number of physicians were honored at this affair.

Mayor P. R. Olgiati of Chattanooga, proclaimed March 30 as Doctors Day in that city. The Woman's Auxiliary of the Chattanooga-Hamilton County Medical Society presented a check to the American Medical

Education Foundation. A number of doctors in the area were honored.

Doctors Day was observed in Knoxville and in Greeneville on April 4. The events were sponsored by the Woman's Auxiliary.

Licensing Board Revokes Permit of State Doctor

The State Licensing Board for the Healing Arts has revoked the license to practice of Dr. Chester E. Hardy of Ruskin Cave. He was accused of unethical conduct in the use of a chemical compound known as "glyoxylide" as a treatment for cancer. Dr. Hardy was expelled from the Nashville Academy of Medicine and Davidson County Medical Society in May, 1950. The action of the Nashville Academy of Medicine was later upheld in the courts. He sued for reinstatement of membership, but lost his case in Chancery Court in 1953. This decision was upheld by the Court of Appeals in August, 1954.

MEDICAL NEWS IN TENNESSEE

Baptist Hospital to Add Wing

A seventy-bed wing will be built this year at Baptist Hospital in Nashville to meet the demand for additional space, it has been announced.

An additional 30 beds will be made available by May 1. This will boost the hospital's capacity from 240 to 340 beds, hospital officials announced.

Tennessee State Mental Hospitals

The Department of Mental Health has issued statistics upon the movement of patients in the mental hospitals under its jurisdiction during the first quarter of this year.

Total—Eastern, Central, Western State Hospitals			
On books Jan. 1, 1956	3,494	3,930	7,424
Admitted Jan. 1-Mar. 31	320	317	637
Discharged Jan. 1-Mar. 31	245	263	508
Died Jan. 1-Mar. 31	70	80	150
On books Mar. 31, 1956	3,499	3,904	7,403
Clover Bottom Home			
On books Jan. 1, 1956	514	570	1,084
Admitted Jan. 1-Mar. 31	10	7	17
Discharged Jan. 1-Mar. 31	4	2	6
Died Jan. 1-Mar. 31	2	6	8
On books Mar. 31, 1956	518	569	1,087

University of Tennessee College of Medicine

The Atomic Energy Commission has awarded a research grant of $9,086.00 to Dr. William M. Hale, Department of Bacteriology, to study the effect of gamma radiation on infections and immunity, in the hope of finding some method of circumventing the ill effects of radiation which follow an atomic attack.

★

Dr. Jesse D. Perkinson, Jr., Department of Chemistry, has been awarded a $3,780 grant by the American Cancer Society to study the effects of radiation from internally administered isotopes on normal and malignant tissue to establish some of the biochemical differences between the two types of body tissue.

★

Dr. A. J. Cummins, Department of Internal Medicine, has been awarded a grant by Lakeside Laboratories for $3,672 to continue study of the anticholinergic compound (JB-340) on human colonic motility, and a grant of $3,000 by the Sandoz Company to study the effectiveness of a long-acting gastric secretory depressant drug in the management of peptic ulcer.

★

Dr. Robert A. Woodbury, of the Division of Pharmacology, has been awarded a grant of $6,000 from the American Heart Association for a study of the effects of drugs on muscle of the heart.

★

Dr. T. S. Hill, superintendent of Gailor Psychiatric Hospital and Head of the Department of Neurology and Psychiatry, has been granted a year's leave of absence to become director of the clinic for the study and treatment of alcoholics. His duties will be taken over by a committee of three, consisting of Doctors James Alston Taylor, Garabed H. Aivazian and Archibald R. Foley.

★

The Postgraduate Department will offer a program in cardiovascular diseases May 23, 24 and 25, under the direction of Dr. I. Frank Tullis, of the Division of Medicine. It will be directed mainly toward the recog-

nition and management of everyday cardiovascular problems. Only minimal electrocardiographic aspects will be included. The material will be presented by informal lectures, case summaries, patient demonstrations and panel discussions.

Vanderbilt University School of Medicine

Dr. John B. Youmans, Dean, was the Banquet speaker at the National Convention of Alpha Epsilon Delta at Millsaps College, Jackson, Mississippi, on Friday evening, March 30. The title of his address was "Preparation for Medicine." As part of its program the national premedical honor society sponsored a joint conference on premedical education in cooperation with Millsaps College on Saturday, March 31.

✯

Dr. John L. Shapiro has been appointed as Professor and Head of the Department of Pathology. He received his M.D. degree from Vanderbilt University School of Medicine in 1941. Dr. Shapiro has been acting director of the Department since the retirement in 1955 of Dr. Ernest W. Goodpasture, who is now scientific director of the Armed Forces Institute of Pathology, Washington, D. C.

Parkview Hospital at Dyersburg

Citizens of Dyer County had the opportunity on April 11 to view the opening of the new Parkview Hospital in Dyersburg. The $1,500,000 hospital was built under the Hill-Burton Act. The hospital consists of 80 beds exclusive of recovery and labor room facilities.

Completion of the new hospital culminated a civic project launched six years ago by Dyersburg citizens.

West Tennessee Medical and Surgical Association

The 1956 meeting was held on Thursday, May 24, at the New Southern Hotel, Jackson. The following was the program for the afternoon and evening.

Symposium on Bleeding of the Upper Gastrointestinal Tract,—Medical Aspects by Dr. M. K. Gallison, Roentgenological Aspects by Dr. David S. Carroll, Surgical Aspects by Dr. Russell H. Patterson, Jr., all of Memphis; Coin Lesions of the Chest by Dr. C. L. Holmes, Jackson; Reticulum Cell Sarcoma in a One-Year-Old Child: Case Report by Dr. Julian K. Welch, Jr., Brownsville; Dequervien's Disease by Dr. James W. Polk, Union City; Pheochromocytoma by Dr. D. H. Koonce, Jackson; Benign Neurological Lesions by Dr. B. E. Sprofkin, Nashville. The title of the after dinner address was Presidential Pathology by Dr. Amos Christie of Nashville.

International College of Surgeons

Several hundred physicians attended the two day meeting of the International College of Surgeons held in Chattanooga. The Southeastern Division covered doctors from the states of Alabama, Georgia, Florida, North Carolina, South Carolina, Mississippi, Kentucky. Tennessee, Virginia and Louisiana.

PRESIDENT'S LETTER

(Continued from page 210)

tion of slightly over 2½ million appropriates 1½ million annually or 10 times as much as Tennessee. And Florida with a population of 2.77 million sets up $500,000 for 18 months. The Public Service Committee of our state, under the able leadership of Dr. L. W. Edwards, has suggested a budget of $900,000 for the next biennium, an amount seemingly not excessive on comparative study with other states, although the cost of our own program will be slightly less since no medical fees are necessary.

Finally, we as physicians, being the custodians as it were for the medical welfare of our indigent population and being responsible for where these indigent patients must be referred for treatment, will of necessity view this problem from a broad prospective and approach it from the viewpoint of what is best for our individual patient. Yes, we are our brother's keeper!

R P Blood M.D.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Department, 112 Louise Ave., Nashville 5, Tennessee.

◆

Locations Wanted

A 28 year old single physician, Catholic. University of Tennessee graduate. Desires general practice in community over 5,000. Available July 1, 1956. LW-207

◆

A 33 year old married physician, Episcopal. Graduate University of Maryland. Now interning in General Surgery. Priority IV. Available July 1, 1956. LW-208

◆

A 34 year old married physician. Protestant. Graduate Washington University. Two years pediatric training and a third year in progress. Available July 1, 1956. LW-210

◆

A 30 year old married physician, Protestant. Graduate Tulane University. Board Certificate held in Internal Medicine. Now in residency. Priority IV. Community preferred 20,000 and over. Desires clinic, assistant or associate. Available July 1, 1956. LW-214

◆

A 38 year old married physician, Protestant. Graduate Tulane University. Desires full time indusrial practice in East or West Tennessee. Priority IV. Available immediately. LW-218

◆

A 33 year old married physician, Catholic. Graduate University of Tennessee. Desires clinical, industrial or associate practice in community of 10,000 or more. Specialty in general surgery. Available April, 1956. LW-219

◆

A 28 year old married physician, Protestant. Graduate Vanderbilt University. Now taking residency in Pediatrics. Priority IV. Desires pediatric practice, clinical or associate, in small or medium sized community in East Tennessee. Available August 1, 1956. LW-220

◆

A 37 year old married physician. Episcopal. Graduate Northwestern University. Now completing fellowship at Mayo Foundation in Internal Medicine. Desires clinic, assistant or associate. Available May, June, 1956. LW-222

◆

A 27 year old single physician. Presbyterian. Graduate University of Tennessee. Now Flight Surgeon in Japan with Air Force. Desires general practice in community of 2,000 to 25,000. Available June 1, 1956. LW-223

◆

A 33 year old married physician. Methodist. Graduate University of Tennessee. Three years Urology—Board eligible. Desires urology practice in clinic, assistant or associate. Available July 1, 1956. LW-225

A 36 year old married physician, Baptist. Graduate University of Louisville. Now in residency. Priority IV. Member AMA. Desires surgical practice in community 5,000 to 10,000. Available July 1, 1956. LW-226

◆

A 29 year old married physician. Methodist. Graduate University of Louisville. Now interning. Desires general practice, assistant or associate. Available July, 1956. LW-227

◆

A 28 year old married physician, Catholic, desires hospital in which to continue residency in Gyn.-Ob. Member Hondurian Medical Association. Available July, 1956. LW-228

◆

A 27 year old married physician. Graduate University of Maryland. Now interning. Desires general practice, clinic, assistant or associate. Available July 1, 1956. LW-229

◆

A 36 year old married physician, Protestant. Graduate George Washington University. Taken Part I American Board of Surgery. Desires general practice with surgery, clinic, assistant, associate or industrial, in community 3,000 to 300,000. Available now. LW-230

◆

Physicians Wanted

Excellent opportunity: Physician to take over general practice with surgery if desired, in town of 4,500 population. Located northwest Tennessee. Leaving for residency. PW-61

◆

East Tennessee community desires general practitioner. Population of town 833, of trade area 10,000. One other physician in community with limited practice. Plans are being made to build a clinic in the near future. Considerable medical equipment has been purchased and is in storage. PW-69

◆

Doctor wanted for general practice in East Tennessee city with exceptionally large trade area. Town is 35,000 population. Good hospital facilities. Beginning salary will be associate with one other physician. PW-70

◆

Physician in small West Tennessee community desires a doctor to practice with him. Small hospital. Wants physician to work toward a partnership. Good opportunity. PW-71

◆

Physician to work as full-time examiner, some psychiatric training necesary, nice working conditions, good salary, all equipment furnished, 40 hours a week with 30 days annual leave and 15 days sick leave a year. PW-76

◆

Middle Tennessee community of 700 desires physician for general practice. Have $10,000 pledged for clinic. No other physician in town. PW-77

◆

Middle Tennessee community of 2,000 desires physician to take over general practice. Plan to build clinic in very near future. No other physician in community. PW-78

TENNESSEE STATE MEDICAL ASSOCIATION COMMITTEES, 1956

STANDING COMMITTEES

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Symposium: Present Day Treatment of Pulmonary Tuberculosis*

The treatment of pulmonary tuberculosis has undergone remarkable changes in the past ten years. Therefore it is time to survey the present situation as appears in the papers of this symposium.

W. W. HUBBARD, M.D.,† *Moderator*, Nashville, Tenn.

INTRODUCTION

Within the past fifteen years there have been more developments for the control and treatment of tuberculosis than in any other period in the history of the disease.

In 1940, there were 2190 deaths from tuberculosis in Tennessee, with a death rate of 74.9 per 100,000 population. Provisional data for 1955 show that 550 persons died of the disease—the death rate being 14.8 per 100,000.

Nevertheless, the disease is still a major problem in the state since new and hitherto unsuspected cases are being reported at the rate of approximately 3000 per year.

The dramatic reduction in death rate is due to many factors, among them are:

1. Better living conditions;
2. Development of photofluorographic X-ray equipment and its use in case-finding programs, making the X-ray examination of large numbers of people economically feasible;
3. The construction of additional hospital facilities for the treatment of the tuberculous patients;
4. Development of antibiotic and chemotherapeutic agents effective against *M. tuberculosis;*
5. Improvement of anesthetic technics making intrathoracic surgery safe; and
6. The improvement of procedures for surgical collapse, and the development of technics for resection of the lung.

Within the time alloted, this panel will discuss only therapeutic developments.

*Read before the Meeting of the Tennessee State Medical Association, April 10, 1956, Memphis, Tenn.

†From the Middle Tennessee Tuberculosis Hospital, Nashville, Tenn.

DRUG THERAPY*

THOMAS B. HALTOM, M.D., Nashville, Tenn.

Since streptomycin became generally available in 1947-1948, a new era in the management of tuberculosis has evolved. During this interval there has been an accelerated decrease in the mortality rates, attributable primarily to advances in chemotherapy. The hopes for a panacea have not, however, been fulfilled. Nonetheless, with the improved medical and surgical treatment available today, our goal should not be a mere prolongation of life or temporary arrest of the disease, but should be the return of a permanently rehabilitated patient to his community. The fundamental problem in the individual patient still remains the balance between the tubercle bacillus and the resistance of the host. Bed rest and

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drug therapy are the two means of shifting this balance in favor of the host. Certain principles relative to drug therapy will be discussed.

Chemotherapy, as with other therapeutic measures, is more effectively employed if the pathogenesis of tuberculosis and the mechanisms of healing are understood. The most reversible portion of the tuberculous lesion is the non-necrotic exudate, and it is here that the most demonstrable effect of antimicrobial therapy is seen. Providing extensive caseation necrosis is not present, acute exudative disease usually resolves rapidly, and more or less completely, under adequate chemotherapy. The effect on the ever troublesome, and perhaps more characteristic, caseation necrosis is far less striking. The responses in this portion of the lesion consist of a slightly increased tendency for resolution and a definitely augmented propensity for fibrous encapsulation. Different views exist as to the ultimate fate of tubercle bacilli contained in areas of encapsulated caseation necrosis following prolonged chemotherapy, particularly as regards the need for resecting such lesions. The response of cavitary components to drug therapy varies greatly. Generally, it can be said that small, new cavities are prone to heal, while the converse usually pertains regarding the large chronic cavities. Chronic fibroid tuberculosis shows little or no change under drug therapy. We can say, therefore, that the changes in tuberculous disease under chemotherapy are the same as those observed in the natural course of the disease, the changes being more rapid and associated with a greater degree of resolution and fibrosis. It has been postulated that the antimicrobial effect is greatest when the tubercle bacilli are multiplying rapidly, as in acute disease, and least when they are growing slowly, as in chronic disease.

We are greatly indebted to the large cooperative studies which have permitted an accelerated evaluation of a score of antituberculous drugs.

Streptomycin, the first potent agent, has proven to be one of our most effective weapons. It is given intramuscularly in 1 Gm. doses twice a week, statistical studies having shown this to be as effective as daily injections in long term management. Daily injections may be given to acutely ill patients for a short period to bring toxic symptoms under control more quickly. High dosage at daily intervals for prolonged periods is to be avoided because of the increased incidence under such circumstances of involment of the vestibular portion of the eighth cranial nerve. This toxic reaction is almost negligible if the drug is given in 1 Gm. doses twice a week, though it does occasionally occur in elderly patients and in patients with pre-existing eighth nerve damage. *Dihydrostreptomycin,* which can be used in place of streptomycin, has less tendency to involve the vestibular portion of the eighth nerve but has more toxicity to the auditory portion. Though there is lack of agreement on the lessened eighth nerve involvement, it has been suggested that a "50-50" mixture of the two drugs be used.

Isoniazid was thrust upon the scene, in 1952, with a great deal of publicity. It is now agreed that it is our most potent antituberculous drug. There has been a low incidence of toxic reactions, the most noteworthy being a peripheral neuritis which has responded inconsistently to pyridoxine and the group of B vitamins. In relation to streptomycin, isoniazid possesses the advantage of greater diffusion into serous fluids, spinal fluid and caseous tissue, along with the ease of oral administration. The dosage is usually 4 to 6 mg. per kilo per day in divided doses (300 mg. per day is commonly used) though in more serious situations 8 to 10 mg. per kilo per day may be advisable.

Para-aminosalicylic acid has proven to be a most useful drug when combined with isoniazid or streptomycin, possessing only a weak antituberculous action when used alone. It is given orally and is frequently associated with gastrointestinal disturbances, particularly nausea and vomiting. Different forms of the drug have been used to minimize this problem, with varying degrees of success. The sodium salt is less irritating but must be given in larger amounts (16 Gm. as against 12 Gm. of para-aminosalicylic acid, both in divided doses). It should be noted that the drug is an anti-

thyroid compound and thus has a goitrogenic effect. Goitres so produced are best treated by thyroid hormone and not by iodine.

One of the major limiting factors in the drug therapy of pulmonary tuberculosis has been drug resistant organisms. Although there is a low incidence of naturally occurring resistant tubercle bacilli, the practical problem lies in acquired resistance. It is believed that acquired resistance is a phenomenon of survival of the fittest,—the gradual evolution of mutant strains capable of living in a new environment. This phenomenon occurs clinically only in those situations where tubercle bacilli continue to multiply when exposed to antibiotic therapy over a period of time, namely, in the patient with an open lesion which does not yield to treatment. The most effective means of combatting this problem has been the use of combined drug therapy, the organisms being attacked from two or more sides, thusly reducing the percentage of resistant mutants which survive and thereby making prolonged effective therapy possible. In order for this to occur, it should be emphasized that the organisms must be sensitive to each member of the drug combination. Sensitivity studies are therefore important, and should be obtained at, or before the initiation of therapy and at intervals thereafter.

Isoniazid and para-aminosalicylic acid form the most effective combination presently available. It is generally agreed that streptomycin should be kept in reserve in case resistance to isoniazid should develop, particularly since streptomycin does not appreciably seem to enhance the effect of the para-aminosalicylic acid-isoniazid combination. Exceptions to this view are patients with miliary tuberculosis and tuberculous meningitis. Streptomycin and para-aminosalicylic acid form the other proven combination, quite effective, though not as effective as the isoniazid-para-aminosalicylic acid combination.

There are three other drugs which have an established place in the treatment of tuberculosis. *Oxytetracycline* in the dosage of 2 to 5 Gm. per day may be used in place of para-aminosalicylic acid, possessing approximately the same order of clinical effectiveness and delaying drug resistance when used in combination. *Pyrazenamide* is an effective drug, given orally in the dosage of 50 mg. per kilo per day, not widely used because of its hepatic toxicity. *Viomycin* is likewise an effective agent, given in the dosage of 2 Gm. twice a week, with the slight hazard of renal toxicity. Viomycin and pyrazenamide occupy an intermediate position of effectiveness, and can be used in combination therapy but are used primarily to cover surgical procedures in patients whose organisms are resistant to streptomycin and isoniazid. Information on other drugs now being investigated is inadequate for evaluation at the present time.

Drug therapy should be planned in relation to bed rest and surgery when treatment is instituted. The plan may be modified as the patient's response is evaluated. Chemotherapy should not be interrupted until the therapeutic goal has been reached since bacterial resistance may develop. Generally, if sputa are to convert to negative, if cavities are to close, if infiltrates are to resorb, they will have done so in the first 6 to 8 months of therapy. Operations should be done, if indicated, at this time since the incidence of bacterial resistance increases beyond this point. The total duration of drug therapy should be at least 12 months and probably for a minimum of 18 months. Depending on the individual patient, courses of therapy up to two and three years are not exceptional, carrying the patient at least to the inactive stage (X-ray stability and sputum negativity for six months).

Summary. Drug therapy alone is no panacea. The treatment of pulmonary tuberculosis requires a coordinated program, of which chemotherapy is just one part. Prolonged treatment is still required, though less long than in the prechemotherapeutic era. Combination drug therapy is advocated to prolong effectiveness.

GENERAL MANAGEMENT AND PNEUMOTHERAPY*

P. M. HUGGIN, M.D.,† Knoxville, Tenn.

The overall management of the tuberculous patient may be quite complicated. It requires full cooperation between the physician and patient. The prognosis of the case may depend on the impression given by the physician whose unpleasant duty it is to tell some one that he is suspected of having tuberculosis. If it is treated too lightly, and the patient is given the impression that he has only a small amount of disease, when he actually has a cavity the size of a half dollar in the apex of one lung, and that a few weeks in bed with drugs is all that will be needed, it can make future management very difficult. On the other hand, if he is told he has a big hole in his lung, that he is going to be ill for a long time and that he is a tremendous source of danger to anyone with whom he comes into contact, it may make a total invalid of him and he will lose all incentive to get well. So, we should be as tactful as possible and assure him that something can be done.

There are a few fundamental facts that should be adhered to by both physician and patient.

The *diagnosis* is most important and should not be made too hastily. A positive diagnosis of active tuberculosis cannot be made by X-ray alone. The shadow seen by the radiologist may or may not be tuberculous in origin. A tentative diagnosis can be made and the patient put to bed while further studies are being carried out. By way of parenthesis, it might be said that active treatment begins with putting the patient to bed. A careful history, especially in regard to family contacts, the tuberculin reaction, and sputum studies should be obtained before antimicrobial therapy is begun. All of these, with the exception of sputum cultures can be accomplished within a few days.

Radiological evidence of pulmonary infiltration, plus one or more direct smears positive for acid-fast organisms, are strong evidence of active tuberculosis and drug therapy should be started. Pulmonary infiltration, which for one reason or another is thought to be of recent origin, or a changing lesion in a previous stable lesion, plus a positive tuberculin reaction and a family history of tuberculosis may be considered as enough evidence to begin active treatment. However, specimens of sputum or fresh gastric contents should be collected for study and culture before antimicrobial therapy is begun.

Rest. The prime factor in the recovery of any patient from tuberculosis remains rest. All other treatment procedures that we have available now are adjuncts to bed rest. The patient who thinks he can get well without it is almost certain to be disappointed. The length of time of rest depends upon the individual response as shown on a trial basis. In spite of the great admiration we have for surgery and the antimicrobial drugs, none of us would attempt to treat tuberculosis without facilities for adequate rest, whether it be in the home or a tuberculosis hospital. The place of rest should be as pleasant for the patient as possible. He should be able, in a measure, to keep up with the happenings of the day and at the same time be relieved of the worries of everyday living. He should be relieved of financial worries. Probably of more importance, the patient should have the intelligence and facilities to prevent dissemination of the disease to other members of his family. He should be especially careful in regard to children. During the first few months of his illness he should have close medical and nursing supervision. It takes an unusual amount of self-discipline to rest properly. While the disease is active, it is the obligation of the physician to help the patient make the necessary psychologic

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adjustment to combat his disease, or to learn to live with it.

Until the discovery of streptomycin in 1944 the physician had no weapon with which to attack the tubercle bacilli within the body. All treatment was directed towards building up the body resistance to the disease and mechanical means of bringing rest to the affected part. *Artificial pneumothorax* was used extensively for many years as a method of controlling tuberculosis. Since the advent of drug therapy and the improvement in surgical "know-how," this form of treatment is being used much less,—in fact in many centers it is not being used at all. It has been found that the disease can be controlled better with drugs and resectional surgery and with fewer complications. None of us who treat tuberculosis want to forget artificial pneumothorax, but neither are we anxious to return to it as a frequent method of treating the disease.

Artificial pneumoperitoneum still has its advocates. The complications of pneumoperitoneum are much less likely and less harmful than pneumothorax. It can be used when there is extensive bilateral disease. It causes the patient very little discomfort. It requires the patient to see his physician at least every 2 weeks and most often once each week. Its true value though is somewhat questionable. One is never certain that the patient might not have done just as well on bed rest and drugs alone. It does have this disadvantage though, it sometimes causes one to postpone more definitive treatment in the hope that pneumoperitoneum would do the job and avoid operation. Only too often pneumoperitoneum simply delays other procedures. So, we are not using pneumoperitoneum as frequently as we did a few years ago.

The *follow-up care* of the tuberculous patient is most important. In general it might be said that the patient's lesion has become stable when there has been no roentgenologic change for three months. His convalescence might be said to begin at this point. He should be allowed very gradually to take on more activities. First, to care for his personal requirements, then to very slowly assume more and more duties until he can return to full time activity. This usually takes about one year, depending on how extensive his disease has been and many other factors. His course should be followed with x-ray examination of chest at least every 3 months, and his general health be closely observed. Since tuberculosis has a great tendency to relapse, one should be on the alert for signs of recurrence of activity.

Rehabilitation. During this time, however, rehabilitation can be planned and work begun to prepare the patient to reenter society as a useful citizen. There is a great opportunity for all of us to use this period in our patient's experience much more profitably. Rehabilitation should begin soon after the diagnosis is made and, if the patient is to be treated in a hospital, some form of occupational therapy begun at the time of admission. This will help the patient in many ways, most of all it helps prevent him from losing self confidence. He can be made to feel that he is of some use to society and that life is worth living. In addition, it will cause him to be less restless and apprehensive. It helps to pass away the time and he makes a much better patient. Often times, later on in his rehabilitation program, it brings out certain talents and native abilities that were not known to exist. Many a patient has had his life changed for the better by his experience with tuberculosis.

These are some of the high lights of the management of the tuberculous patients. The diagnosis, the choice of treatment, the follow-up and rehabilitation, any of these items could be used as a subject for a discussion of considerable length. Suffice it to say that the intelligent management of the tuberculous patient requires the utmost cooperation between the physician, patient, family, and social agencies available.

SURGICAL COLLAPSE THERAPY*

SHELDON E. DOMM, M.D., Knoxville, Tenn.

Introduction. The period between World War I and World War II spans the rise and fall of collapse therapy as the bulwark of the surgical treatment of pulmonary tuberculosis. To those of you who have entered practice since 1950, a discussion of collapse therapy may seem of purely historic interest, if of any interest at all. By the same token those of you who graduated in the thirties and who are not actively treating tuberculosis in your practice may not be fully aware of the magnitude of the trend away from collapse therapy.

Discussion. By the time of his death in 1918, Forlanini saw general acceptance of pneumothorax, and this form of temporary collapse was almost universally employed in the twenties and thirties in spite of the handicaps of frequent pleural effusion and the necessity of continuing the refills for three years.

In the same year, 1918, Wilms died, having developed the paravertebral thoracoplasty. This operation, as modified by Sauerbruch, Alexander, O'Brien and others, became in the ensuing two decades the permanent collapse procedure of choice throughout the world.

Although thoracoplasty yielded a high percentage of good results in selected cases of peripheral cavitation, the results were unpredictable in many cases such as in tension and inspissated cavities, endobronchial tuberculosis and tuberculous bronchiectasis. Thoracoplasty also carries the danger of some degree of scoliosis with its serious cosmetic and physiologic sequelae.

By 1937, Alexander had collected enough cases of pulmonary resection to come to the opinion that resection should not be performed for parenchymatous tuberculous lesions in preference to thoracoplasty. "It is possible, however," he observed prophetically, "that lobectomy, or even pneumonectomy, may prove to be useful for a highly selected group of cases."

In the heyday of collapse therapy patients, in whom intrapleural pneumothorax was impossible and in whom thoracoplasty was inadvisable, sometimes benefited from extrapleural procedures. This approach, pioneered by Tuffier and Baer, was also introduced in World War I days and was frequently modified in the hope of overcoming the hazards inherent in the technic, i.e. those arising from the presence of foreign material in the mobile chest wall in contact with a devascularized parietal pleura.

It is of interest that phrenic nerve interruption, suggested in 1911 by Stuertz, was popularized in the early twenties by Goetze and Felix. This procedure was widely utilized in the thirties as a temporary, and less often as a permanent, form of collapse although the rate of cavity closure was not very high.

Collapse therapy has given way to the drug-plus-resection regimen simply because the latter is better, not because collapse therapy is no good. It is well to reflect that many people are alive and well today who would not have recovered without the help of collapse therapy. It is also fitting to remind ourselves that the principles of collapse treatment are sound. That is to say, rest is a cardinal therapeutic approach seriously denied by no one, and few would deny that tuberculous cavities heal more readily when the walls are in apposition than when separated.

The decline of the so-called temporary forms of collapse therapy has been especially dramatic, and certainly has been influenced by the high incidence of complications. Notable among these is nonexpansion of the lung collapsed by pneumothorax. We are still seeing patients, whose disease has long since been cured and whose refills have long since been abandoned, who are handicapped by a persistent space, a fibrin peel or by so-called false re-expansion. These patients are salvaged by decortication.

Phrenic nerve interruption likewise has fallen into disrepute, partly because of the high incidence of incomplete return of dia-

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phragmatic function. This physiologically serious complication is of course more frequent when pneumoperitoneum has been used following phrenic interruption. We are still seeing patients with a high diaphragm as a result of these factors, and many of these can be restored by plication of the diaphragm.

At the present moment, in the rapidly changing field of management of tuberculosis there are only two forms of collapse therapy which are in favor, thoracoplasty and extraperiosteal plombage.

Thoracoplasty is of course frequently employed as an adjunct to resection, but there is still the occasional case in which primary thoracoplasty is the treatment of choice. Such patients are usually bad risks, and often the thoracoplasty is done in a sense as a preliminary step prior to the desired resection. In some cases thoracoplasty transforms a bad risk for resection into an acceptable risk, and sometimes the thoracoplasty bring about arrest of the lesion so that resection is deemed unnecessary. There is some question whether one should resect in a patient who is getting worse on treatment, especially if the organisms are possibly drug resistant. Probably such cases are managed more effectively by thoracoplasty, followed possibly by resection when and if the process is stabilized.

In this connection I would like again to digress from the restrictions of the topic assigned me and mention a form of treatment not apparently included in the subject of this panel, i.e. drainage. We feel that transthoracic cavity suction drainage (the Monaldi procedure) in conjunction with a staged throacoplasty is the treatment of choice in selected cases of a giant cavity, with or without endobronchial involvement complicated by bilateral disease.

Extraperiosteal plombage utilizing various types of plastic material is a form of treatment applicable to a patient who is too desperately ill to tolerate either thoracoplasty or resection. The creation of the space in the chest wall superficial to the intercostal tissues reduces, but does not eliminate, the chief hazards of the old extrapleural procedure, i.e. infection of the space in the chest wall, and perforation into either the pleural space or into a pulmonary cavity by the foreign material. The plombage procedure is well tolerated by the patient and is theoreticaly reversible. Also the collapse, if effective and tolerated, can be made permanent by removing the foreign material and doing a thoracoplasty. However, the procedure is infrequently indicated and has not enjoyed wide popularity.

Before the knell is sounded on collapse therapy we may well ponder three little points:

(a) The present regimen (drugs and resection) is hardly ten years under way, whereas collapse therapy flourished for thirty. Medical history is full of examples of accepted treatments being temporarily set aside only to be reinstated, oftentimes after correction of some relatively minor disadvantage.

(b) The philosophical biologists warn us that any antimicrobial should be looked upon as a strictly temporarily valuable weapon, and that the field should be considered a race between the germs and the biochemists. We may well be living in a period of time which will come to be considered as the era in which the *M. tuberculosis* was rendered insensitive to streptomycin and INH.

(c) Failures of resection seem to become more frequent as the various reported series get longer and older. Likewise, the incidence of serious complications seems to become higher as the resection era (or possibly the surgeon) gets older.

Conclusions. Collapse therapy, although sound in principle and of proved validity in practice, has been replaced in the armamentarium of the phthisiologist by drug therapy and resectional surgery, because of the theoretical and practical superiority of the latter and because of the high incidence of complications and sequelae of the former.

At present the temporary types of collapse therapy have largely been abandoned, with the exception of extraperiosteal plombage. Thoracoplasty still plays a role although relatively minor, and when combined with Monaldi drainage is of value in selected cases.

Collapse therapy, though in eclipse, may shine again.

RESECTION OF TUBERCULOSIS LESIONS*

FELIX HUGHES, M.D., JAMES BURWELL, M.D., and JAMES PATE, M.D.,† Memphis, Tenn.

The development of skill in thoracic surgery plus the effectiveness of long term chemotherapy has made resection the preeminent form of surgical treatment of pulmonary tuberculosis. Resection now, under favorable circumstances, is rarely complicated by new tuberculous pulmonary lesions or by fistula and empyema. The patient recovers rapidly with no chest deformity and with preservation of maximum pulmonary tissue and pulmonary function. Follow-up studies indicate better results than by any other form of surgical treatment.

Indications for Resection. Ideally, the tuberculous lesion is detected early, necrosis has not taken place, chemotherapy is started, rest instituted and the process heals by resolution. Variations from this ideal, constituting failure of medical treatment, to result in healing, is the broad indication for surgical treatment. An indication of medical failure is the finding of a tuberculous cavity or a positive sputum. Recurrent areas of tuberculous activity shown by roentgenography, recurrent pulmonary hemorrhage or symptomatic bronchiectasis, i.e. pneumonia, positive sputum, hemoptysis, or large quantity of sputum are indications of failure of medical treatment. Certain caseous residual nodules should be resected.

Resection may be contraindicated by the presence of: (1) extensive tuberculosis, (2) of inadequate pulmonary function, of (3) cardiac, (4) liver, or (5) renal disease, or (6) severe rheumatoid arthritis which may prevent resection because of immobility of the cervical spine.

The tuberculous patient is best treated by a group of physicians including a thoracic surgeon because of the need for individualization. Persistent cavitation after 4 to 8 months of medical treatment may be best treated in suitable cases by resection of the disease. Resection before this time may be unnecessary surgery. Delay beyond this time may unnecessarily prolong hospitalization and permit antibiotics to lose effectiveness. It is now recognized that the routine chest films are not reliable in detecting the presence of many cavities, or in showing the extent of the pulmonary disease process. Planigrams are more reliable but require experience for interpretation. Chest roentgenograms at the onset of the disease, planigrams, intensive bacteriologic studies of sputum, and clinical observation form the basis for determining the success or failure of treatment.

The persistence of tubercle bacilli in the sputum indicates an unhealed lesion. Complete roentgenographic study including bronchography with new rapidly eliminated agents, may indicate the site of disease, which is usually a cavity or bronchiectatic area. Endobronchial lesions are rare because of the effectiveness of chemotherapy with these lesions. Resection is usually the best treatment. Bilateral apical disease in poor risk patients may be treated by plombage thoracoplasty. Disease in the middle or lower third of the lung responds poorly to collapse procedures.

Bilateral localized lesions in patients with adequate cardiopulmonary reserve are safely treated by resection bilaterally. Certain cases may be prepared for resection by plombage thoracoplasty, or if resection fails, the sputum may be converted to negative by plombage thoracoplasty.

Residual Nodules. Following the medical treatment of tuberculous lesions a dense circumscribed closed lesion may form due to the encapsulation of necrotic material. When the sputum contains tubercle bacilli removal is indicated. Many believe all such nodules should be resected, though the majority of experts have a conservative attitude. All agree that nodules over 3 cm. in diameter should be removed, and that nodules under 1 cm. may be left alone. At present these cases would appear to be

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treated best by individualization of the problem. It is doubtful that removal of small healing foci will prevent recurrence of tuberculosis or afford any immunity to the disease.

Segmental or Subsegmental Resection. The effectiveness of chemotherapy has reduced the size of persistent tuberculous lesions to a subsegment or segment of involved lung tissue in the majority of patients. This effectiveness of antibiotics plus skillful surgical technic makes possible the safe removal of only the diseased tissue on most patients. The operation is safe, 99.6 per cent of over 500 patients having a lobe or segments removed at Kennedy Hospital having survived the procedure.

Pneumonectomy. The persistence and recurrence of tuberculosis so as to produce involvement of an entire lung indicates a poor resistence on the part of the patient and ineffectiveness of the antibiotics. These two factors, plus longstanding disease and reduced pulmonary reserve, make pneumonectomy for extensive pulmonary tuberculosis a formidable procedure. All of these factors have resulted in a slightly increased mortality from pneumonectomy in recent years (10 per cent to 13 per cent). At Kennedy Hospital the operative mortality for all pneumonectomies (87) has been 3.5 per cent, in pneumonectomy for cancer 2 per cent (49), and for noncancerous lesions 5.3 per cent, (two of 38 patients). The two deaths followed pneumonectomy for tuberculosis prior to 1952; 30 pneumonectomies have been performed since 1952 without mortality.

Decortication and Resection. The infrequent use of intrapleural pneumothorax at the present time has almost eliminated cases requiring decortication of lungs held captive by a strong fibrous membrane. Removal of the membrane and resection of localized disease has restored pulmonary function in many of these patients.

Bronchogenic Cancer and Pulmonary Tuberculosis. The presence of, or appearance of a density in an area where a tuberculous lesion was not previously present should arouse a suspicion of cancer. Dense lesions not responding to chemotherapy may indicate the presence of malignancy. The incidence of bronchogenic cancer in a ratio of one to 1000 tuberculous patients, during the past 10 years with 8000 tuberculous patients, is higher than would be expected even in smokers.

Summary. Resection of residual pulmonary tuberculous disease is indicated for: (1) cavitation, (2) tubercle bacilli in the sputum, (3) reactivation, (4) symptomatic bronchiectasis, (5) bronchial stenosis, (6) certain residual nodules, (7) localized disease with chronic pneumothorax, and (8) when cancer is suspected. Resection may be done with a low mortality rate and is followed by few complications. Follow-up studies indicate better success than with any other surgical form of therapy.

Diabetic Coma: The Value of a Simple Test for Acetone in the Plasma—An Aid to Diagnosis and Treatment. Lee, Charles T., and Duncan, Garfield G. Metabolism Clin. & Exper. 5:144, 1956.

The authors review the indications for, and the use of tests for acetone in the plasma in the treatment of patients in varying degrees of diabetic ketosis. Plasma acetone determinations, using commercially available acetone powders or tablets, are easily performed and the results are readily interpreted. The presence or absence of ketosis may be quickly noted by this method. When severe degrees of ketosis are present vigorous treatment with large doses of insulin is indicated. The use of the plasma acetone test during the treatment of diabetic coma gives early evidence of returning insulin sensitivity, and aids in the prevention of over-treatment with insulin. In the light of evidence presently available, the authors believe that the degree of ketonemia manifested by the patient is a better guide to the prognosis and treatment of diabetic acidosis than any other single, readily available test. (Abstracted for the Tennessee Diabetes Association by Charles A. Rosenberg, M.D., Memphis.)

The author considers the complications of peptic ulcer which have surgical implications as well as the technical aspects of operative treatment.

THE SURGICAL MANAGEMENT OF PEPTIC ULCER*

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Although surgery is reserved primarily for the complications of peptic ulcer such as perforation, obstruction, hemorrhage, intractability, and the possibility of malignancy, the disease remains a challenging problem to the surgeon. In the past few years there has been a great reduction in the mortality from appendicitis and many other surgical diseases which has not been shared by peptic ulcer. Actually, in spite of a steadily dropping mortality rate from gastric resection,[12] there has been a slight increase in the deaths from this disease in the past 5 years in the state of Tennessee, whereas the mortality from appendicitis has had a 50 per cent reduction in the same period of time (Fig. 1). The figures from

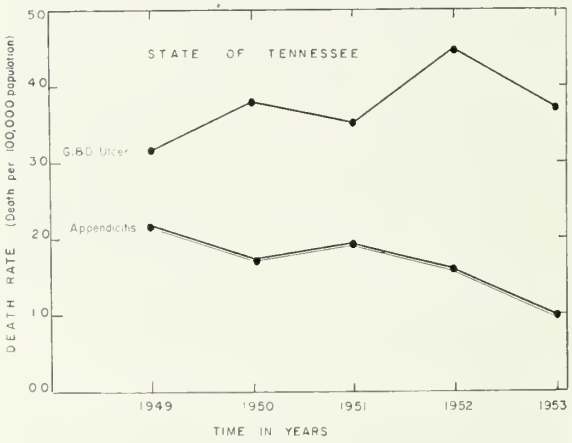


Fig. 1.

the United States as a whole are comparable. (Fig. 2.) Our profession needs to become more completely and accurately informed about peptic ulcer in an effort to reduce the mortality and complications of this disease.

Massive hemorrhage remains the most important single cause of death in patients having ulcer. Kane and associates[18] report that gastrointestinal hemorrhage as a cause of death at the Cook County Hospital has

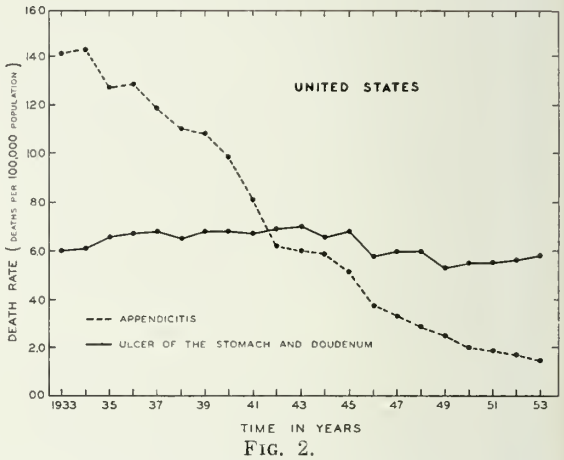


Fig. 2.

more than doubled since 1938. It might be to our advantage to readjust our thinking concerning this complication in order to save more lives. The surgical management of peptic ulcer remains a somewhat controversial issue, and the fact that there is very little standardization in treatment gives some indication that our results could be improved. A study of the statistics will show that the greatest number of deaths occurs in the middle and older age groups (Fig. 3). Therefore, this group of patients

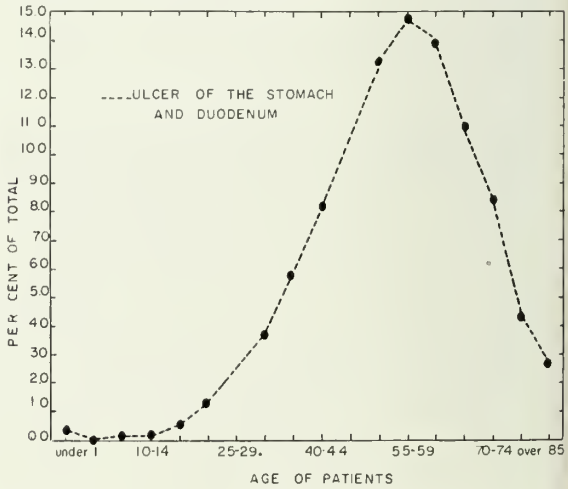


Fig. 3.

would seem to offer the best possibility for improvement of results.

Choice of Operation

Many authors agree that the subtotal

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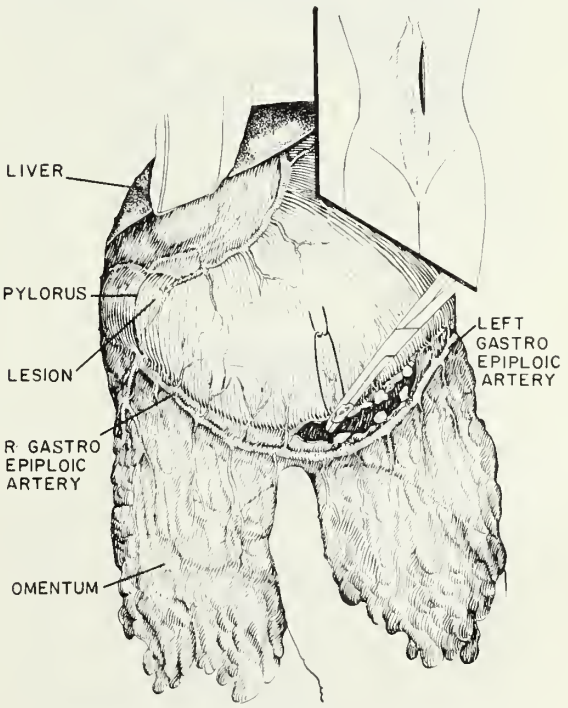
gastrectomy with removal of about three-fourths of the distal stomach is the best basic operation for most of the complications of peptic ulcer.[1, 6, 7, 12, 20, 24, 25, 28, 29, 30, 33] Some prefer to call this operation a radical distal partial gastrectomy.

Vagotomy became very popular and was widely used for several years throughout the country, but there is a trend away from its use today because the results have been disappointing. Johnson and Orr[17] have abandoned vagotomy alone altogether, and have severely limited its use in addition to gastroenterostomy. Many surgeons have gradually abandoned or greatly limited the use of vagotomy. Dragstedt[9] and others[36] have reported recurrence of ulceration after complete vagotomy. Obviously, this operation is not the ultimate answer to the ulcer problem. However, the physiologic basis for vagotomy is a sound one, and it is a good operation to have in the surgeon's armamentarium for use in patients who cannot stand adequate resection, though it should be combined with a gastroenterostomy. Although Walters and associates[34] have pointed out the superiority of gastric resection over vagotomy in the surgical management of gastrojejunal ulcer occurring after gastroenterostomy, they have shown the important role of vagotomy in the treatment of gastrojejunal ulcer following adequate gastric resection. In their hands there have been improved results and a lower mortality, with vagotomy over re-resection in the latter complication. This would tend to show the advantage of keeping vagotomy as an operation held in reserve for complications that may follow gastric resection, rather than using it as a primary operation. The much quoted committee appointed by the American Gastroenterological Association to study the problem found as good results from partial gastrectomy alone as from resection plus vagotomy, provided at least 70 per cent of the stomach was removed in the former group.[7] This offers added weight to the concept that vagotomy might best be used as a secondary operation.

There are a number of surgeons who have reported good results from hemigastrectomy or antrectomy combined with vagotomy instead of a more radical resection.[1, 10, 26] However, Wangensteen[35] finds that when concomitant gastrojejunostomy or hemisgastrectomy is done with a vagotomy, the latter loses a great deal of its protective action. Craighead[5] states that the combination of vagotomy and 50 per cent resection probably has little more to offer than does vagotomy and gastroenterostomy. Final evaluation of this approach cannot be given until more time has elapsed.

Technical Considerations

Surgical technics are as individualistic as the surgeons who use them. Consequently, there are several good technics for partial gastrectomy. Recently there has been an increased interest in the Billroth I operation. However, the anterior Hofmeister procedure as popularized by Marshall[20] lends itself particularly well to the handling of resections for ulcer, particularly when one so often encounters an adherent fixed duodenal ulcer perforating into the head of the pancreas, and the need for a high resection is so great. We have felt that partial closure of the stomach stump does reduce the incidence of the "dumping syndrome." Hence, this operation has worked best in our hands. We have found it well worth while to extend every effort to remove all



DIVISION OF THE GASTRO-COLIC OMENTUM
FIG. 4.

ulcers including the densely adherent ones. The extra time and effort taken in such procedures pays off in reduced complications and better results. (Figs. 4 and 5.)

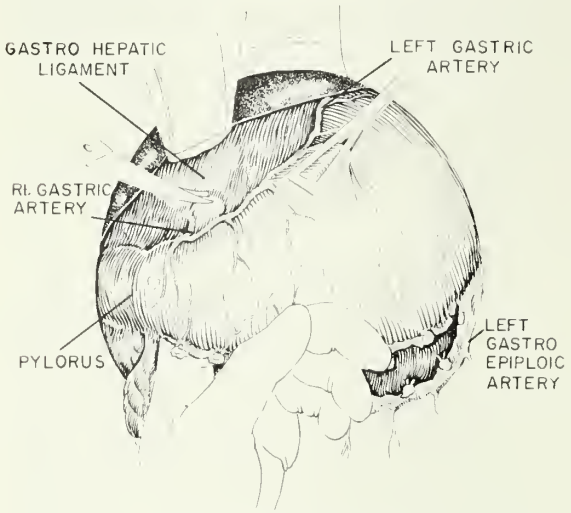


FIG. 5.

The technic of this operation has been documented previously in detail.[15] After the stomach is mobilized, by dividing the gastrocolic and gastrohepatic omentum past the ulcer below and to the upper one-fourth of the stomach above, the duodenum is divided between clamps, and the stump carefully closed with three rows of sutures. Continuous #0 gastrointestinal chromic catgut sutures are used for the inside two rows and interrupted Halsted mattress sutures of #000 silk for the outside. (Figs. 6 and 7.)

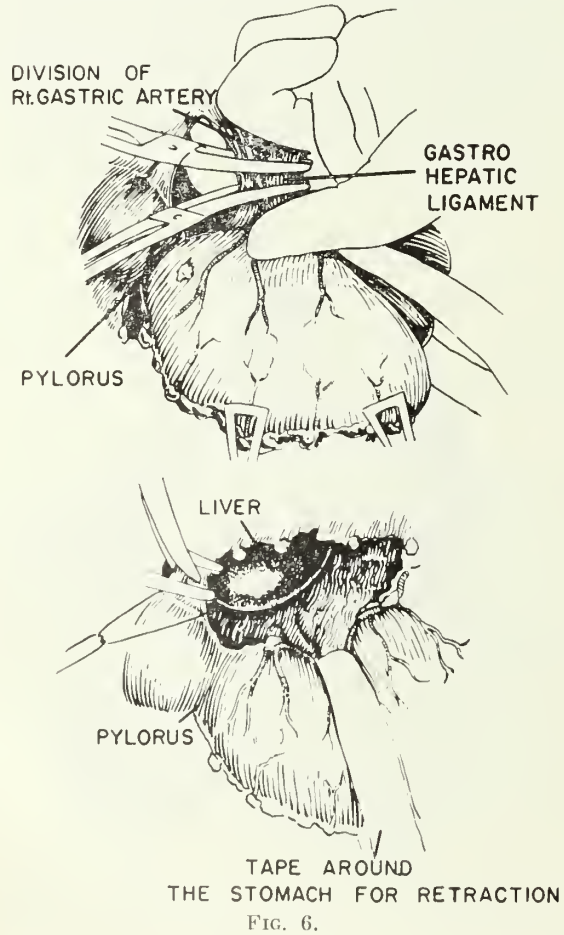
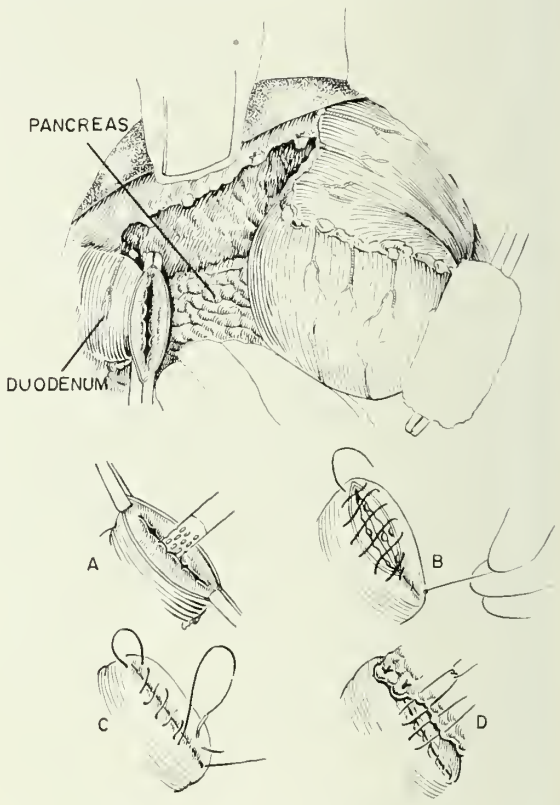


FIG. 6.

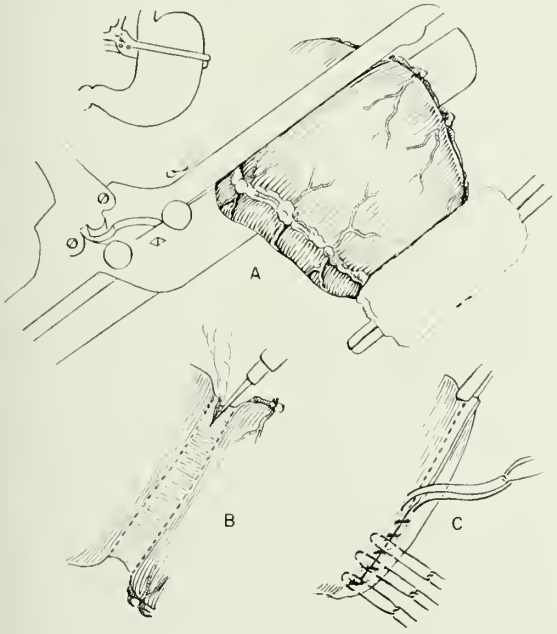


DIVISION OF DUODENUM AND CLOSURE OF THE STUMP

FIG. 7.

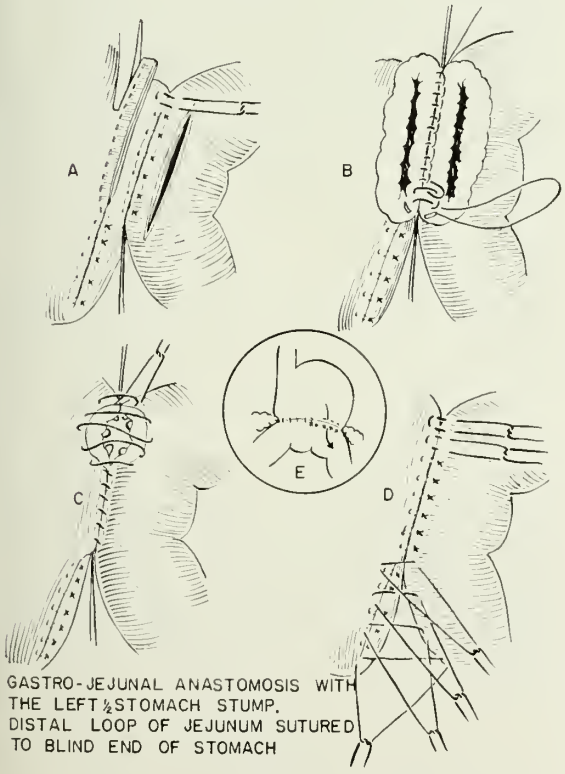
A von Petz clamp is placed across the stomach at its upper one-fourth and the stomach divided between the two rows of metal clips. Two rows of sutures are taken over the right one-half of the stomach stump above the row of clips using an inside row of continuous catgut and an outside row of interrupted silk. The loop of jejunum selected for anastomosis is brought up anterior to the colon and sutured to the left one-half of the remaining portion of stomach with interrupted mattress sutures of silk. The jejunum is opened along the row of sutures and the clips cut away from the left one-half of the stomach stump. The anastomosis is completed using an inside

layer of continuous catgut and an outside layer of interrupted silk. The distal loop of jejunum is sutured to the closed end of the stomach to give further support and prevent angulation at the stoma. (Figs. 8 and 9.)



A VON PETZ CLAMP APPLIED ACROSS UPPER 1/4 OF STOMACH B· DIVISION OF THE STOMACH C· CLOSURE Rt1/2 STOMACH STUMP

FIG. 8.



GASTRO-JEJUNAL ANASTOMOSIS WITH THE LEFT ½ STOMACH STUMP. DISTAL LOOP OF JEJUNUM SUTURED TO BLIND END OF STOMACH

FIG. 9.

Perforation

The mortality from acute perforation of peptic ulcer has been reduced dramatically in the past few years primarily due to the influence of the antibiotics. However, this condition remains a surgical emergency demanding immediate operation. Despite some good reports from England on the nonoperative treatment of perforated ulcer, we are in agreement with Texter and Barborka[31] that such therapy should by all means be limited to those cases of many hours duration which have sealed off, or in those where surgical closure cannot be accomplished. Simple closure of the perforation by plication and the use of an omental tab to cover the hole has proven the best operation in our hands. The abdomen is carefully suctioned out and closed without drainage.

Although gastric resection for acute perforation is practiced in some clinics, we feel that this invites a higher mortality and morbidity. Any patient who has had the severe peritoneal insult with resultant electrolyte imbalance that accompanies perforation is never in as good condition as those who are properly prepared for major gastric surgery. In addition some patients who have had perforation never require subsequent surgery. Therefore, gastric resection for acute perforation may be subjecting the patient to an unnecessary major procedure that carries a higher mortality. However, if the patient has had previous severe hemorrhage, obstruction or other complications requiring resection, gastrectomy may best be done on the patient with acute perforation if his condition permits.

Obstruction

Obstruction usually occurs in ulcers of long standing, culminating in persistent vomiting and loss of weight. However, there are certain patients, having active ulcers with spasm and edema, in whom the condition may simulate cicatricial obstruction. These may be dramatically relieved by a vigorous trial of good medical mangement. If medical management fails to relieve the obstruction, subtotal gastric resection is the treatment of choice. Nevertheless, the older or poor risk patient with low acid

levels may still be advantageously treated by a simple posterior gastroenterostomy. Such patients are best kept on a strict ulcer regimen postoperatively because restoration of the function of the stomach will allow the acid levels to rise again in some cases, bringing about a return of the activity of the ulcer.[2]

Hemorrhage

It has been a time honored dictum with many surgeons that anyone having had two or more severe hemorrhages from a peptic ulcer should have a gastric resection. The same applies for patients past the age of 45 who have had one massive hemorrhage. Since acute massive hemorrhage is the complication of peptic ulcer that carries the highest mortality rate, it deserves the closest attention of the surgeon.[35]

In spite of the fact that there are some who still believe in the conservative management of all cases of hemorrhage,[3] including some excellent reports on the topical use of powdered gelfoam and thrombin,[5] it is believed that earlier operation on the patient with acute massive hemorrhage will save many lives and reduce the over all mortality from this disease. Holman[14] reports a mortality of 14 per cent in 161 cases of hemorrhage treated conservatively, which was reduced to 5 per cent by operating on those patients who continued to bleed massively for 48 hours in spite of good conservative treatment. Included in those operated upon were the ones with previously uncomplicated ulcer who started to bleed in the hospital while on optimum medical care.

Needless to say, other causes of gastrointestinal bleeding should be ruled out, such as esophageal varices, blood dyscrasias, acute gastritis and carcinoma. Apropos of this, many surgeons are obtaining earlier roentgenograms than formerly, even in the face of bleeding, particularly if a previous positive diagnosis is not available.[11]

There are varying degrees of acute hemorrhage and there must be some criterion for surgical intervention. Stewart and associates[25] define "massive" hemorrhage as bleeding of such severity as to lower the total circulating red cell mass to less than 60 per cent of normal. The indications for operation are of course flexible and each case should be individualized. Patients past 45 years of age who have had profuse hematemesis and who show signs of continued bleeding over a period of 12 to 24 hours require surgical intervention. Harvey[13] points out that if the patient is a poor risk he should be operated on early because the chances are that he will become a worse risk. Recurrent massive hemorrhage, whether it occurs days or weeks after the initial episode, is an indication for immediate operation.

It is well known that hemorrhage from peptic ulcer is much more likely to stop spontaneously in the younger patients than in the old, although there are some who dispute the time honored belief that this is due to the presence or absence of arteriosclerosis. Osborn[23] states that acute erosions are the typical lesions of fatal hemorrhage and finds no correlation between these and arteriosclerosis. He feels that acute erosion of tissues, including vessel walls, occurs more readily in the older patient. Although the younger patients may be observed for slightly longer periods, provided satisfactory blood pressure is maintained with reasonable quantities of blood, delay of operation beyond the 48 hour period increases the operative risk. Fatal hemorrhages do occur in young people and one cannot continue indefinitely on conservative treatment in the face of persistent, acute, rapid and profuse hemorrhage.

With plenty of blood available, and being administered during the operation, the stomach is opened up and the bleeding stopped by plication of the ulcer bed with silk. Usually the patient's condition will improve dramatically after the bleeding is stopped. Then, if the patient's condition warrants it, a subtotal gastric resection is done. Many surgeons advocate a so-called "blind resection," if there is sufficient evidence that the blood is coming from the stomach but the exact bleeding point cannot be found.

Intractability

It has been estimated that about 5 per

cent of ulcer patients are refractory to the best of medical treatment. Ulcers penetrating deep into the pancreas are slow to heal and often recur, causing them frequently to be classed as intractable. Some patients who have walled off perforations do poorly on medical treatment. There are still others who simply will not respond to any known medical regimen for no particular reason, keeping the patient miserable with pain and causing much loss of time from work until they have the benefit of surgery.

Although subtotal gastrectomy is the treatment advocated for intractable ulcers, one must watch for the occasional patient whose continuance of symptoms is due to lack of cooperation and adherence to proper treatment. Some patients respond well to medical management in the hospital but promptly have a recurrence when they are again subjected to the stress and strain of every day living. Psychiatric consultation may be of help in such patients.[16]

Gastric Ulcer and the Suspicion of Malignancy

Earlier operation for gastric ulcer is being advocated in a number of clinics today in an effort to reduce the distressing mortality from carcinoma of the stomach. Some go so far as to consider surgical treatment for all gastric ulcers.[14] Others are much more conservative.[19] Marshall[22] reports an incidence of malignancy of 15.8 per cent in 411 consecutive cases of gastric ulcers resected, with an incidence of 19.8 per cent in an earlier series of 131 gastric ulcers which failed to heal or had recurred.[21]

The suspicion of carcinoma must be entertained in all gastric ulcers, particularly if they fail to heal promptly or tend to recur, those on the lesser curvature being less likely to contain malignant cells than those in the other locations. Four weeks is ordinarily given as the time limit for healing or marked regression.[27, 32] Otherwise resection is advisable. The results of medical treatment are considerably worse for gastric than for duodenal ulcer, as well as the results of gastroenterostomy and vagotomy.[7] However, the results of subtotal resection for gastric ulcer are very good, the incidence of marginal ulcer being much less than that following resection for duodenal ulcer. These factors would tend to show the advantage of subtotal gastric resection over other types of operation for this type of lesion.

Summary

With the advent of antibiotic therapy, improvement in pre- and postoperative treatment, better operative technics, and safer anesthesia, the operative mortality from subtotal gastric resection has declined sharply. There should have been a concomitant dramatic drop in the mortality rate from peptic ulcer as a whole, comparable to other surgical diseases, but this has failed to develop.

Since massive hemorrhage carries the highest mortality, it is felt that proper management of this complication offers the best chance for improvement in results. Earlier operation for the patient with continuing massive hemorrhage is advocated to lower the mortality. This is particularly true in the older age groups.

Earlier resection for the gastric ulcer that does not heal promptly is advocated in an effort to reduce the distressing mortality from gastric cancer.

Although gastric resection for acute perforation has been reported more frequently in the past few years, it is believed that a lower mortality will result from simple closure of the perforation unless the patient has other complications making resection mandatory.

The use of vagotomy in the surgical management of peptic ulcer is a controversial subject. However, it is felt that this procedure is most advantageously used as a secondary operation, particularly in gastrojejunal ulcers following the conventional 75 per cent resection of the stomach.

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Discussion

R. L. SANDERS, M.D., (Memphis, Tenn.): Dr. Howard is to be congratulated on the excellence of his paper. He has reviewed the more recent literature and has given us the benefit of his practice and the technic of his choice in the surgical management of peptic ulcers.

I agree that the majority of ulcer patients are treated satisfactorily by our medical colleagues, and surgery is advised only when certain complications arise, such as, perforation, hemorrhage, obstruction, and intractability. Most patients consult the physician because of pain, hemorrhage, and the fear of cancer.

If the ulcer is on the duodenal side of the pylorus, one should not fear cancer, because it is almost immune to malignant degeneration. However, if the ulcer appears on the gastric side, one must be on the alert, always keeping in mind the possibility of a carcinomatous lesion. Almost 20 per cent of our patients coming to operation on account of gastric ulcers showed malignant cells in the base of the resected ulcers. When the diagnosis of gastric ulcer is established, we give our patients the benefit of the doubt and treat them medically for a short period. If healing is not complete in 6 to 8 weeks, they are advised to have a gastric resection.

We are more and more aware of the difference between ulcers in the duodenum and those on the gastric side of the pylorus. It is our belief that all duodenal ulcers should be so designated, and

those on the gastric side called gastric ulcers. The term "peptic ulcer" should not be used for both lesions.

Hemorrhage has always been a real problem and will probably remain as such. One episode of bleeding does not always demand surgery, however if repeated often, operation is usually indicated. Massive hemorrhage is in a class almost alone. In many cases, a resection proves to be life saving, yet I prefer to individualize each case.

I agree with the essayist, the older patients are in more danger than those under 45 years of age.

The type of operation largely depends upon the individuality of the surgeon. We find the Hofmeister technic, using the posterior or anterior placing of the anastomosis, very satisfactory. More recently we also remove the great omentum. This is our usual practice in all cases of cancer of the stomach and gastric ulcers. The omentum is nearly devascularized during any resection, hence it is of but little service as a defense organ. We are now trying the method in practically all cases, and have found the results most satisfactory.

Our experience with vagotomy has not been satisfactory, and we only use it as a secondary procedure, not a primary principle in the surgical care of duodenal or gastric ulcers.

I wish to thank Dr. Howard for the privilege of discussing his paper, and also for his kindness in sending me an advance copy.

LILIENFELD, A. M. Variation in Mortality from Heart Disease—Race, Sex, and Social-economic status. Pub. Health Rep. 71: 545, 1956.

In this paper is an analysis of the effect of age, sex and socio-economic influences on 14,504 deaths certified as due to heart disease which were recorded in Baltimore during the period 1949 through 1951. Of the 5,908 deaths due to arteriosclerotic heart disease, males had markedly higher death rates than females in both white and non-white racial groups but of particular interest was the lack of any significant difference between the five socio-economic groups ranging from high to low levels. This is marked contrast to the social class distribution in England and Wales.

The category, myocardial degeneration, which include such terms as fatty degeneration, myocardial degeneration with atherosclerosis, cardiovascular degeneration, atheroma of heart or myocardium and chronic myocarditis contained 3,111 deaths. In general the rates for white males was higher than white females but there was little difference between the sexes of the non-white. The social distribution of mortality from myocardial degeneration was similar to that in England and Wales decreasing as the social-economic status improved.

For hypertensive disease with mention of heart disease, 3,641 deaths, the rates for non-whites were about twice as high as those for the whites. The rates for females were higher than males in both racial groups. The higher white female rates were higher in all socio-economic groups except the highest where the male rate exceeded the female rate. Among the non-whites the female rate is higher than the male in the three lower socio-economic groups but a suggested reversal occurs in the two upper socio-economic groups. These findings suggest that the lower socio-economic groups have higher mortality from hypertensive disease than the higher groups.

The results of this study, although applicable only to Baltimore, indicate some striking differences which seem to be related to age, sex or socio-economic factors. The apparent differences between Baltimore and England and Wales indicate a need for further study the author believes. Studies of this type often point to a fruitful area for research but they do not often tell the investigator exactly where to look for the best results. Nature does not give up its secrets that easily. (Abstracted for the Middle Tennessee Heart Association, by Robert W. Quinn, M.D., Nashville.)

STAFF CONFERENCE

University of Tennessee*

Abdominal Pregnancy

DR. PHIL C. SCHREIER: This conference deals with the problem of abdominal pregnancy. The first patient will be presented by Dr. J. C. Gilbert.

DR. J. C. GILBERT: V. E. S., age 28, gravida II, para I, was admitted to the Maternity Division on February 18, 1956.

Present Illness: Her last normal menstrual period occurred in October, 1955. She had no bleeding in November or December. Spotting occurred once during the first week in January, and one week later she bled more heavily for three to four days. During the last week in January, spotting recurred and continued until the time of admission. The night before admission, she began bleeding more profusely, had severe abdominal cramping, and passed clots and tissue. She had noticed a knot in her right side for the past two months.

Physical Examination: Examination of the abdomen revealed an easily palpated, grapefruit size, slightly tender mass in the right lower quadrant. Pelvic examination revealed a small amount of pinkish blood in the vagina and a small piece of tissue in the external os. The cervix was soft and slightly blue. The uterus was firm, twice normal size, and slightly tender on movement. The left adnexa was negative, but on the right the previously described large mass was apparent. It was soft but not cystic nor tender. The cul-de-sac was clear and colpocentesis yielded no blood or fluid.

Laboratory Examination: The hematocrit was 39 volumes per cent and the urinalysis negative. A piece of tissue that she had passed, grossly appeared to be a decidual cast. This was confirmed by microscopic examination.

Course in Hospital: The admission diagnosis was an old ruptured ectopic pregnancy, or perhaps an incomplete abortion with an ovarian tumor. The patient was observed for two days, during which time she complained of right lower quadrant pain. On February 20, an exploratory laparotomy was done. Operative findings: The uterus was approximately twice normal size and displaced to the left by a large right adnexal mass that consisted of the products of conception. The amniotic sac was intact and contained a 14 cm. dead fetus. The omentum was adhered to the medial side of the mass. There were a number of old blood clots around the mass and anterior to the uterus. The placenta definitely appeared to be alive and was stuck to the uterus and the right pelvic wall. Extensive exploration of the abdomen was not done. Blood loss was estimated at approximately 100 cc. Surgery consisted of opening the membranes, removal of the fetus, and closure of the abdomen in the usual manner. Her postoperative course was uneventful and she was discharged on the eleventh hospital day with a large mass still palpable in the right lower quadrant.

DR. MARTHA LOVING: This patient had an exploratory laparotomy with possible abdominal pregnancy in mind although absolute certainty of the diagnosis had not been made. At surgery the diagnosis was apparent and she, fortunately, presented no evidence of placental separation or intra-abdominal bleeding. She was managed conservatively. No bleeding was encountered, and her abdomen was closed without drainage. This case illustrates that conservative management is best in a patient who is not bleeding. Presumably, this placenta will ultimately be absorbed. A few cases require re-exploration at a later date. However, in the majority this is not necessary.

DR. SCHREIER: As far as I have been able to determine, we have not encountered a patient who required re-exploration, however, a review of the literature reveals that this may be necessary in some patients. The management of abdominal pregnancy varies according to circumstances. The next patient illustrates a difficult phase of the problem. Dr. Schettler, will you present the next patient's history?

DR. BETTY SCHETTLER: This patient was a 31 year old, gravida V, para IV.

Present Illness: Her last normal menstrual period occurred on August 25, 1955, and she was essentially well until October 20, 1955. At that time, she had sudden onset of lower abdominal pain with a small amount of vaginal bleeding. This was diagnosed by her private physician as pelvic inflammatory disease and she was treated with antibiotics. After two to three days, she felt well and returned to work. On November 21, 1955, she had a similar episode of abdominal pain and was seen in the out-patient department. Examination of the abdomen revealed acute tenderness over the entire lower abdomen. The cervix was soft and blue; uterus enlarged to the size of a two months pregnancy; adnexa revealed no masses and no tenderness; and the cul-de-sac was empty. The impression at that time was early pregnancy with possible pelvic inflammatory disease. She was treated conservatively with sulfadiazine. Symptoms cleared and she again returned to work. On December 9, a similar episode occurred causing her to stay in bed for

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seven days. A week later, she had another episode of severe abdominal pain, this time accompanied by fainting and vomiting. A private physician prescribed bed rest, and her symptoms disappeared. On January 12, another episode of severe abdominal pain with abdominal distention occurred. She was admitted to the hospital.

Physical Examination: Examination revealed temperature 104, pulse 88, respiration 28, and blood pressure 130/80. The abdomen was distended, acutely tender with marked rebound tenderness over the entire lower abdomen. No definite masses could be palpated and no fetal heart tones were heard. The cervix was soft and blue, and the uterus was the size of a two and a half months pregnancy. The adnexa were exquisitely tender but no masses could be palpated.

Laboratory Examination: The hematocrit was 29 volumes per cent, urinalysis negative, and her blood type was AB, Rh negative. X-ray examination of the abdomen revealed one fetus approximately four and a half months gestation high in the right mid-abdomen.

Course in Hospital: The admission diagnosis was abdominal pregnancy with intra-abdominal hemorrhage. After 36 hours of observation, it was noted that the abdomen was becoming more distended and a repeat hematocrit was 23 volumes per cent. An exploratory laparotomy was done at this time.

Operative findings: The placenta and intact membranes containing a 25 cm. live fetus were found in the mid-lower abdomen extending to the level of the umbilicus. The placenta was attached to the posterior wall of the uterus, the right broad ligament, the omentum and small bowel. There was approximately one liter of old blood in the abdominal cavity. The membranes were opened and the fetus removed, the cord was ligated close to the placenta. In spite of special efforts not to disturb the placenta, profuse hemorrhage occurred from the placental attachment area. Approximately 15 yards of gauze packing were packed over the bleeding site, and the patient's abdominal wall was closed with No. 32 interrupted wire sutures. The patient's blood loss during surgery approximated 2000 cc., and she received a total of 2500 cc. by transfusion. Her postoperative care included Wangensteen suction for five days, antibiotics, and repeated blood transfusions. The gauze packing was gradually removed over a four to five day period. By the sixth postoperative day the patient was afebrile, and her general course was considered very satisfactory.

On the tenth postoperative day, her temperature began to rise and for the next few days remained at approximately 101 to 102 degrees. Also, at this time she was noted to have a profuse drainage from the lower end of the incision. *Hemolytic Staphylococcus aureus* and *Pseudomonas aeruginosa* were cultured from the incision. These being sensitive to Chloromycetin, she was given one gram twice daily. On the 29th postoperative day a 15 cm. mass was palpable in her right lower quadrant. Four days later an incision and drainage of the right lower quadrant mass was done under local anesthesia, and 800 cc. of purulent material were obtained. She continued to have fever in the range of 103 degrees. However, subjectively, she appeared much improved. Repeated cultures revealed *Pseudomonas aeruginosa*, which was said to be sensitive to polymyxin. She was given 25 mg. of polymyxin every six hours for the next few days.

One week following the incision and drainage, the patient appeared to be improving and while sitting on the side of her bed developed extreme dyspnea and expired suddenly. An autopsy was performed, and the final pathologic diagnosis is not yet available. The clinical impression was abdominal pregnancy, pelvic peritonitis with abscess formation, and a massive pulmonary embolus being the immediate cause of death.

DR. B. E. Everett: Although the outcome of this patient was not as favorable as the first, I believe this history is more typical of the usual abdominal pregnancy seen on this service. Abdominal symptoms began, according to the history, at about eight weeks gestation with acute abdominal pain and slight uterine bleeding. This probably represented a tubal abortion. These bouts of abdominal pain, vaginal bleeding, and eventually abdominal distention continued until hospital admission was necessary. This patient's management was in accord with the usual routine in this Division. The findings at operation are typical of the usual case. It is difficult to understand why massive hemorrhage occurs in many of these cases when the operator is very careful not to disturb the placenta. The management of this complication here was excellent. The patient was packed and the bleeding apparently well controlled. This patient's postoperative course and eventual demise was not typical of abdominal pregnancy *per se*, but was apparently due to the development of extensive pelvic peritonitis with p e l v i c a b s c e s s which led to the thrombo-embolic phenomenon.

DR. LOVING: In view of the fact that this patient had intra-abdominal hemorrhage prior to surgery and during surgery, I wonder if it might not have been wise to explore further to determine the source of bleeding, and remove the placenta and/or various organs to which it might be attached.

DR. RALPH BETHEA: This service has

afforded considerable experience along this line. These sudden spontaneous hemorrhages may be so massive that any attempt at ligation of vessels would result in exsanguination of the patient. However, we have had opportunity to do cases in both ways, extirpating all the pelvic organs in one case, and others where hemorrhage has been so violent, packing was the procedure of choice without question. These spontaneous hemorrhages have been sufficiently common to have evolved some precautionary techinques. We make a five yard roll available at the beginning of the operation, and in the event of hemorrhage this is applied over the area of bleeding. More than one five yard roll may be needed and used without hesitation. With the bleeding controlled, the end of the five yard roll is brought out through the lower end of the incision. This is removed beginning on about the third day, removing approximately one-third to one-fourth of the pack each day. There is usually some drainage as in this patient following the removal of the pack. This has proved to be an efficacious, live-saving procedure, as I believe it would have been in this case had not the thrombo-embolic complications arisen.

DR. JOHN Q. ADAMS: This patient illustrates one of the hazards of packing. That is, the development of infection within the abdominal cavity. We should be especially careful to observe aseptic technique during this procedure as the blood and necrosis of tissue make infection extremely common.

DR. SCHREIER: Dr. Bledsoe, will you present the third patient for discussion?

DR. ROBERT BLEDSOE: This patient, age 16, was first seen in the City of Memphis Hospital on May 25, 1954.

Present Illness: She complained of vaginal bleeding with cramping for two weeks. She did not consider herself pregnant and, although rather vague, thought that her last menstrual period had occurred sometime in May, 1954. Her menstrual periods had previously been normal. Examination on admission revealed a pelvic mass which was thought to be a uterus of three months size. Her hematocrit was 30 volumes per cent, and the urinalysis was negative. The admitting diagnosis was threatened or inevitable abortion, and the patient was placed on bed rest and antibiotics. She was discharged three days later and next seen on June 15, 1954 in the gynecology clinic. Examination at that time revealed the cervix firm, pink, and smooth. The uterus could not be palpated due to lower abdominal tenderness. Both adnexa were tender but no masses were palpable. Diagnosis of pelvic inflammatory disease was made and she was treated with penicillin. She was next seen June 25, 1954 in the gynecology clinic. She had noted a mass in her lower abdomen, but there had been no vaginal bleeding since her discharge from the hospital six weeks previously. A pelvic mass was palpable the size of a four months pregnancy, the uterus not being separately outlined. The cervix was clean and pink. She was admitted to the hospital immediately with a diagnosis of ovarian cyst.

Physical Examination: The uterus could now be felt displaced to the right and was of normal size. The pelvic mass extended to the level of the umbilicus on the right side.

Laboratory Examination: Her hematocrit on admission was 27 volumes per cent.

Course in Hospital: Following admission to the hospital, the patient experienced moderate pelvic pain, more severe in the left lower quadrant. The abdomen was soft and not exquisitely tender. Emergency X-ray of the abdomen was made, but expert interpretation was not available at that time. No fetal parts could be seen on the X-ray by those who saw it. It was felt that this patient had a densely cystic tumor filling the pelvis.

DR. SCHREIER: This patient was scheduled for elective surgery. However, in the interim because of severe intra-abdominal hemorrhage, she became an emergency. At that time, the report reached the clinician that the roentgenologist had found evidence of a fetal skull on the abdominal X-ray previously taken. The exploratory laparotomy was done on June 30, 1954 at 8:00 P.M. Dr. Bledsoe, would you report the findings of this operation?

DR. BLEDSOE: Upon opening the peritoneum there was noted approximately 1500 cc. of old and fresh blood within the peritoneal cavity. There was a mass approximately 25 cm. in diameter adhered to the left lateral pelvic wall, the posterior broad ligament, uterus, and the posterior parietal peritoneum. The omentum and intestines were densely adherred to the superior portion of the mass. The cyst wall was approximately one centimeter in thickness, and there was one area 3 cm. long anteriorly, where the sac had ruptured. From this site there was active bleeding. The uterus was normal size and displaced to the right by the mass. The membranes were ruptured and a 19 cm. macerated fetus was removed. Because of massive hemorrhage, the patient went into profound shock, her blood pressure dropping to 50/0. The bleeding site was packed tightly with two and one half rolls of gauze. She received 2000 cc. of whole blood prior to surgery and 2000 cc. during surgery. At the time of completion of the operation, blood pressure was 120/70 and pulse 88. Beginning on the third postoperative

day, the pack was removed gradually, requiring three to four days for complete removal. The postoperative course was complicated by acute renal failure and electrolyte imbalance. Her urinary output was nil for the first two days, then increasing gradually to a normal output on approximately the tenth postoperative day. The electrolyte imbalance consisted of hyperkaliemia, on the third and fourth days the plasma potassium reaching as high as 8.0 mEq/L and three days later hypokaliemia down to a level of 3.4 mEq/L. The patient was discharged home August 8, 1954 with a draining sinus in the upper end of the operative incision. She has been followed closely since that time and at the present time has a normal pelvis.

DR. SCHREIER: Dr. Adams, you followed this patient closely regarding her electrolyte imbalance. We'd like for you to discuss that phase of the complication.

DR. ADAMS: This patient developed an acute renal failure as a direct result of the abdominal pregnancy and its complications. There are two reasons for this: first, she was in shock before and during surgery for an unknown period of time, and secondly, the nephrotoxic effects from the absorption of damaged tissue products and blood from the peritoneal cavity. Fortunately, this complication does not arise often, but when it does occur it demands very careful management. The two main factors involved in the management of acute renal failure are: 1.) limitation in fluid intake so as not to overload the circulation and produce pulmonary edema, and 2.) the management of hyperkaliemia and careful attention to the potassium balance. The azotemia that develops as a result of acute renal failure is not lethal and cannot be used as a prognostic sign. This patient had a limitation of fluid intake during the first few days of her postoperative course to one liter plus her daily urinary output. If his regimen is followed and the body weight checked daily, there should be no danger in overloading the circulation. There are several steps in the management of hyperkaliemia. The first is the administration of glucose along with small doses of regular insulin to increase the storage of glycogen, and thereby carry potassium into the cell. Wangensteen suction within itself will relieve the body of a considerable amount of potassium. If this is not successful, one might proceed to intestinal lavage. If these measures are not successful, one must resort to the use of the artificial kidney. This might be made necessary by hyperpotassemia, severe acidosis, or pulmonary edema. It should be emphasized that the level of azotemia is not an indication for artificial dialysis. The dietary intake of these patients is also important. They should be supplied with food low in potassium and low in protein. Their diet should be high in carbohydrate and fat but low in protein content. This holds both the NPN and the potassium at a lower level. This patient's potassium reached 8.0 mEq/L. This is almost as high as the average patient can tolerate.

DR. BETHEA: We might briefly make several points of value in the general treatment of abdominal pregnancies at the time of surgery. First, the value of an incision high in the abdomen to enable the area of pathology to be approached with ease might be reiterated. The membranes may have the normal appearance or may be thickened and fibrosed. Although the occasion did not arise in any of these patients, the use of cul-de-sac drainage in cases where there is sepsis or an abscess is very important. These drains are best placed by having an assistant insert an open sponge stick into the vagina and opening it slightly in the posterior fornix. The area between the sponge stick is then incised from within the cul-de-sac and drains inserted.

DR. SCHREIER: In summary you have pointed out a number of challenging phases of the problem of abdominal pregnancy and some of its complications. The difficulties in diagnosis; confusion with possible inevitable abortion, threatened abortion, ovarian cyst, and pelvic inflammatory disease, seem to corroborate the impression that *time* is a big element in making the diagnosis. The history of a delayed period, followed by repreated episodes of pelvic pain with or without vaginal bleeding when accompanied by a gradually increasing tumor would make one suspect abdominal pregnancy. Particular attention has been called to two points in the surgical technique which are aimed at avoiding the inciting of hemorrhage: 1.) making the abdominal incision away from the site of implantation, and 2.) being careful not to cause placental separation by vigorous retraction of the abdominal wall.

CLINICOPATHOLOGIC CONFERENCE

St. Joseph's Hospital

Leiomyosarcoma of the Jejunum*

This 73 year old man was admitted to the St. Joseph's Hospital on May 28, 1955, with the chief complaint of blood in his stools. He had noted dark red to black blood in his stools for about three days prior to admission. During this time, he had become progressively weak. Further history revealed that he had had at least seven similar episodes since 1950. Three of these episodes had occurred within the past year.

In May, 1954, he was hospitalized in St. Joseph's Hospital with an episode of rectal bleeding similar to the present one. At that time a G. I series was negative. It was noted that a G. I. series done in 1952 during a similar bleeding episode also was negative. Bleeding was controlled with a bleeding ulcer regimen, sedation and parenteral antispasmodics. He was discharged after one week. In January, 1954, he had an acute thrombophlebitis involving the saphenous system of the left leg. This was complicated by pulmonary embolic phenomena and infarction of the lower lobe of the right lung. At that time he had bilateral high saphenous and femoral vein ligations.

At the time of present admission to the hospital it was noted that he had no nausea or vomiting. He had indigestion characterized by burning midepigastric pain with sour eructations and infrequent cramp-like pains in the right lower quadrant of the abdomen. These symptoms usually accompanied the rectal bleeding.

At the time of admission to the hospital the physical examination revealed the patient to be in shock with a T. of 98.6° F, R. 18, P. 110, and B. P. 110/70. He was pale, cold and clammy. The chest was clear. The abdomen was soft, not tender and no masses were palpable. The liver, kidneys, and spleen were not palpable. Rectal examination revealed dark red blood. The admission laboratory work included a RBC of 2,370,000, Hgb. of 5.6 Gm. or 38%, WBC 7,350, 15% lymphocytes and 85% segmented neutrophils. The urine was clear, acid and had a specific gravity of 1.010, albumin negative, sugar negative, acetone negative and 2 to 4 WBC per high power field. The Kahn was negative. Subsequent blood counts dropped to as low as 2,100,000 RBC and 5.2 Gm. of hemoglobin. The bleeding time was 2 minutes and the coagulation time was 4 minutes. An electrocardiograph revealed changes compatible with left ventricular strain and coronary insufficiency.

Course in Hospital: The patient was placed on a bleeding ulcer regimen with blood transfusions, sedation and parenteral antispasmodics. He had several massive hemorrhages from the rectum during the first week of hospitalization. Bleeding was finally controlled after eight days of hospitalization. A gastrointestinal series on the third hospital day revealed the esophagus and stomach to be normal. The duodenal cap was smooth in contour and the numerous films taken failed to show any evidence of a duodenal ulcer. No pathology was seen in the duodenal loop. The barium meal passed through the small bowel in the normal length of time and no abnormalities of the small bowel were seen. On the ninth hospital day another G. I. series was negative. On the tenth hospital day an exploratory laparotomy was done.

DR. ALVIN J. CUMMINS: I should like to begin my remarks by saying at the outset that I do not believe I am going to be able to make the correct diagnosis in this case. These problems of gastrointestinal bleeding, in which the X-rays and other definitive tests are negative, always involve considerable guess work, and any diagnosis on my part, I am afraid, will be largely speculative. In my discussion, however, I do hope that I shall perhaps at least mention the diagnostic possibility which the exploratory operation did reveal.

Let us begin by considering the site of the bleeding in this case. We have here a 73-year-old man who on at least seven occasions since 1950 had noticed the presence of dark red to black blood in his stools. The protocol does not mention that he vomited blood. I should, therefore, think that it is most unlikely that the bleeding comes from the esophagus. We have no evidence of cirrhosis of the liver in this man (although I must admit it was not carefully looked for by laboratory examinations, at least on this admission) and therefore little reason to suspect esophageal varices. While varices of the esophagus can occur without cirrhosis, in any bleeding from the esophagus hematemesis is the usual finding, and I believe that seven episodes of rectal bleeding without hematemesis almost rules out completely esophageal varices.

Could the bleeding have come from the stomach? It is possible that it may have, although again the absence of hematemesis on seven different occasions of gastrointestinal bleeding would make it distinctly unlikely. Besides that, no lesion of the stomach was ever seen by x-ray, although it is possible to have an erosive gastritis or hypertrophic gastritis which may bleed with the

*From St. Joseph's Hospital, Memphis, Tenn.

X-ray being entirely normal. Acute ulcerations of the stomach may also occur at times without roentgen demonstration, but I do believe that the absence of hematemesis in this case makes it unlikely that the bleeding arose either in the stomach or the esophagus. The performance of gastroscopy, however, may have been helpful in ruling out such lesions.

Could the blood have come from the colon? Apparently, this was not seriously considered because I find no mention in the protocol that the patient ever had a barium enema examination or a sigmoidoscopy performed. Also we are told that he had black blood in his stools. Now the presence of melena makes it most likely that the bleeding occurred above the ileocecal valve. Apparently the passage of tarry stools following bleeding depends however more on the delay of passage of the material through the gastrointestinal tract than on the precise location of the bleeding site. Experiments done by giving blood through tubes placed in the gut have shown that melena can occur with blood deposited in the region of the cecum if the material is delayed there for a sufficient length of time by the administration of atropine or other "antispasmodic" drugs. However, this is distinctly unusual in clinical situations, and I gather from the protocol that bleeding from the colon was not considered very likely.

I cannot, however, definitely exclude the possibility of a cecal polyp or benign lesion in that area which might have been responsible for the symptoms in this patient. I do believe it most likely, however, that the bleeding originated somewhere in the small intestine, somewhere from the pylorus of the stomach to the ileocecal valve.

Could it have been from the duodenum? Again this seems improbable. Of course we all know that the most common cause of gastrointestinal hemorrhage is peptic ulcer. However, I would think it unlikely that a patient with a chronic peptic ulcer could have had this many X-ray studies without some evidence being found of its presence. He did have a little indigestion at times with burning midepigastric pain, but this occurred, we are told, usually during the episodes of rectal bleeding, and I gather that between the bleeding episodes he was fairly asymptomatic. This does not fit the picture of peptic ulcer, and for that reason and because of the negative X-ray study, I am going to exclude it in this individual. In any patient, especially an elderly man who has a thrombophlebitis of the leg with gastrointestinal bleeding, one must consider the possibility of a pancreatic lesion. The usual situation here is to have a carcinoma of the pancreas, which lesion frequently does bleed by erosion into the duodenum. However, I find it impossible to believe that a man could have had a carcinoma of the pancreas for five years and still be alive. I also find this explanation unlikely because of the absence of roentgen demonstration of distortion of the duodenum or erosion from neoplasm of the pancreas. Because of this I believe the question of thrombosis here is probably a "red herring" in the diagnostic workup, and I do not believe that this man's bleeding was on the basis of a pancreatic neoplasm.

Therefore, I am going to place the site of bleeding lower in the small bowel, somewhere between the ligament of Treitz and the ileocecal valve. This is a length of gut some twenty feet long and of course subject to a variety of lesions which may bleed. Before we consider focal lesions, we should consider the possibility of some bleeding tendency in this man. We have, however, little evidence to back up this diagnostic possibility. We are told that the bleeding time was two minutes, and the coagulation time four minutes, both of which determinations are normal. I see in the protocol no report of a prothrombin determination, however, and it is possible of course to have severe bleeding from lowered prothrombin concentration without having any defect in the bleeding or coagulation time. However, we have no reason to suspect that he had a lowered prothrombin concentration. He had no evidence of cirrhosis of the liver or absorptive defect which was demonstrable, and besides that he had no evidence of bleeding outside of the gastrointestinal tract, which I think would be very likely in a patient who had a lowered prothrombin concentration and bleeding from the G. I. tract on this basis for five years. Conse-

quently, I am going to disregard the possibility of a hemorrhagic tendency and consider that gastrointestinal bleeding most likely came from a focal lesion somewhere in the small bowel.

I am not too chagrined by the fact that even though I am considering a small bowel lesion here, the small bowel X-ray is reported as normal. Unfortunately, X-ray examination of the small bowel is very difficult and not infrequently we are confronted with a normal small bowel X-ray even in the presence of a small bowel lesion of considerable size.

What small intestinal lesions should we consider as potential causes of bleeding? First of all, congenital anomalies may occur. The most common one of these which may cause bleeding is probably Meckel's diverticulum. This lesion is certainly reported as causing symptoms in a patient as old as this one, although we commonly think of it as being symptomatic in an age group considerably younger than this. However, when it is a cause of symptoms in a patient of this age group, it has usually produced similar symptoms for a considerable period of time before this. Even considering that this man had had his first symptoms five years before, he was still 68 at that time which would make, I believe, a Meckel's diverticulum a rather unusual cause of the bleeding in this case. Accordingly, while I cannot definitely exclude the possibility of Meckel's diverticulum, I am going to consider it less likely than some of the other diagnostic possibilities which we shall consider. Other diverticula of the small bowel may occur and may be productive of gastrointestinal bleeding, but these are usually seen on small intestinal X-ray and produce bleeding much less commonly than Meckel's diverticulum, and for these reasons I am going to exclude them also.

Certain ulcerative lesions of the small intestine can produce bleeding. Intestinal tuberculosis is one of them. However, we have in this patient no evidence of pulmonary tuberculosis which certainly decreases by far the probability of intestinal tuberculosis. Also the X-ray is negative, and in such a case the diagnosis would be impossible to make. Furthermore, I believe it would be most unlikely for a patient to have intestinal tuberculosis without more in the way of symptoms such as weight loss, fever, abdominal pain and diarrhea in the presence of enough intestinal lesion to produce such massive bleeding. Also intestinal tuberculosis is not generally considered among the causes of massive gastrointestinal hemorrhage, and so I am going to exclude that possibility.

Chronic stenosing regional enteritis is another possible cause of such symptoms. However, this lesion generally occurs at a much younger age than in the case with our patient, and again I believe that it would be most unusual to have this disease present without more in the way of symptoms such as diarrhea, fever, weight loss, abdominal pain, etc. Chronic regional enteritis is rarely the cause of massive gastrointestinal bleeding without the presence of such symptoms to accompany it. The X-ray did not suggest it, and I think I shall have to exclude that diagnosis also. I believe that some kind of a small intestinal tumor would be much more likely to produce the symptoms observed in this man. Small gut tumors may be either malignant or benign. It would seem to me unlikely that this man harbored a malignant intestinal tumor for five years. Among such tumors may be mentioned lymphosarcoma, leiomyosarcoma and carcinoma. All of these may of course produce serious gastrointestinal bleeding, but I doubt if they would be present for five years without producing death, perforation of the gut, or intestinal obstruction. I believe we can exclude malignant tumors of the small bowel principally on the basis of the duration of symptoms. Much more likely is a benign tumor of the small intestine. In this group we may list adenomas, polyps, carcinoids, fibromas, and lipomas. All of these tumors are much more likely to produce intestinal obstruction or intussusception rather than serious gastrointestinal bleeding, and I think therefore are less likely diagnostic possibilities than two other benign tumors which I should like to mention.

Leiomyoma of the small intestine is a benign lesion which commonly produces serious episodes of bleeding. It may occur

in a patient in this age group, and I see no way in which we can exclude its presence. I am going to list it therefore as one of the major diagnostic possibilities.

The other type of tumor which I should think would be a very good diagnostic possibility would be a vascular lesion, such as a hemangioma or telangiectases. Multiple telangiectasia may occur and involve the gut mucosa and at times also involves the skin and mucous membranes. We have no evidence of telangiectasia of the skin in this case, and unfortunately, gastroscopy and sigmoidoscopy were not performed to reveal the presence of such lesions in the gastric or colonic mucosa. Hemangiomas of the capillary or cavernous type may also occur in the small intestine as well as elsewhere in the gut and are commonly multiple in site. They frequently produce bleeding of the type seen in this individual and may well produce symptoms for the first time in this age. Therefore, I cannot exclude their presence either, and I am accordingly going to list as my best diagnostic possibilities in this patient either a hemangiomatous lesion of the small intestine, which may be either single or multiple, or a leiomyoma of the small gut.

I want to thank you in conclusion for the privilege of discussing this case here, and as I said at the beginning, I am certain that I am going to be as amazed as anyone else when the pathologist finally does reveal to us the operative findings. Thank you very much.

DR. D. J. CARA: X-ray examinations on this patient date back to May 28, 1953, at which time a G. I. series was done and no disease was found in the esophagus, stomach and duodenum. A small bowel series subsequently, showed a normal transit time through the small intestine without evidence of obstruction, neoplastic disease or inflammatory process being demonstrated. Colon examination showed complete filling with no evidence of polyps, diverticula or other defects which could be the source of the intestinal bleeding. Examination of the complete intestinal tract showed no disease.

The examination was repeated in May, 1954, and again there was no radiographic evidence of a lesion which could cause gastrointestinal hemorrhage.

Again in May, 1955, with the onset of bleeding, a complete survey of the intestinal tract failed to show a lesion responsible for the intestinal hemorrhage. In view of the fact that a diagnosis of duodenal ulcer had been made elsewhere, the examination was repeated in June and again a complete G. I. survey failed to show any lesion. Shortly after the last examination surgical exploration of the abdomen was carried out. Following operation, the patient developed a hydrothorax which was demonstrated in a film of the chest which showed the following: The heart was slightly enlarged due to left ventricular preponderance. Calcification was present in the aortic arch. There was no evidence of metastasis in the lungs. The left lung was clear. Fluid was present in the right pleural space extending up to the level of the fifth rib anteriorly. There was no evidence of pneumothorax. The cause of the right pleural effusion could not be demonstrated radiographically. It could either have been on the basis of an inflammatory process or metastases.

DR. WILLIAM W. HURTEAU: An exploratory laparotomy was carried out because of severe and intractible gastrointestinal hemorrhage probably from the upper gastrointestinal tract. A firm, nodular tumor mass approximately 10 cm. in diameter was found in the midjejunum extending out into the adjacent mesentery. A few small lymph nodes were noted in the mesentery. The liver was negative for metastases. 40 cm. of jejunum was resected with an end-to-end anastomosis. The large tumor was completely extra-luminal and apparently arising from the outer muscle coats and thence involving the adjacent mesentery. The jejunal mucosa over the tumor was ulcerated. On cut section the lesion was grayish, white and of a fish-flesh appearance. Several lymph nodes were found in the adjacent mesentery.

Histologic study showed the neoplasm to be infiltrating through the entire thickness of the intestinal wall down to the mesentery. While the mucosa, for the most part, was intact, many focal areas of ulceration were found. (Fig. 1). The source of the

bleeding could have been from any of these points of ulceration. The neoplastic cells were fusiform in shape with conspicuous nuclei which had blunt or "cigar-shaped" forms. While in many areas the cells were rather well differentiated, some of the areas were made up of very anaplastic cells with considerable nuclear abnormalities and excessive mitotic figures. (Fig. 2). The mesenteric lymph nodes showed a considerable degree of hyperplasia, but there was no evidence of neoplastic infiltration. *Diagnosis:* Leiomyosarcoma of the jejunum with penetration by direct extension into the superficial portion of the mesentery. Reactive hyperplasia of lymph nodes, 4 out of 4.

Leiomyosarcomas and all malignant tumors are relatively uncommon in the small intestine. Only 5 per cent of the malignant tumors of the gastrointestinal tract occur in the small intestine as compared to 24 per cent of the benign tumors occurring here. The intraluminal myomas arise from the muscularis mucosae and these are less frequent than extraluminal arising from the muscular coats or the subserosa. Leiomyomas in contrast to carcinoids are particularly prone to produce severe bleeding. It is sometimes difficult to prognosticate the behavior from a histologic standpoint. In general they grow slowly and metastasize to liver, lungs and peritoneum rather than to the lymphatics.

DR. EDWARD ROSSETT: This case illustrates, except for the failure to use gastroscopy and esophagoscopy, how a vigorous diagnostic approach even if not successful in

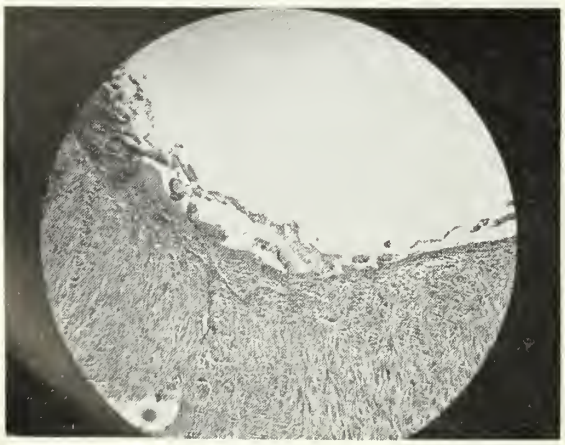


FIG. 1.

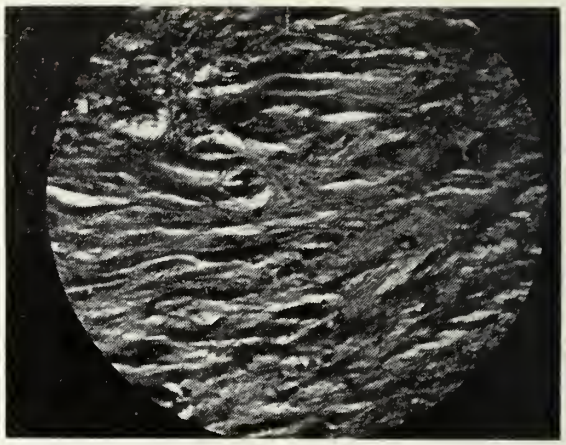


FIG. 2.

arriving at a diagnosis can at least permit exploration. It is unfortunate that this diagnostic approach was not used in an earlier admission. There are only two contra-indications to radiography during bleeding: (1.) The patient is in more urgent need of blood than a diagnosis. (2.) The patient is vomiting and couldn't retain the barium.

DR. J. MALCOLM ASTE: I rise at this point in the discussion to make a plea for the earlier utilization of exploratory laparotomy in cases such as the one presented here tonight. Of course it is preferable to have a diagnosis before surgery is undertaken, and with the development of roentgenography and the various laboratory aids now at our disposal we should be able to have a diagnosis in a high percentage of cases. However, there is a small percentage of cases in which the findings both by physical examination and laboratory methods are equivocal, in which observation should not be carried out too long and exploratory laparotomy should be performed. This patient presented this evening had an excellent clinical work-up, and he had repeated X-ray examinations of the gastrointestinal tract almost to the point of tolerance for X-ray, without a definite diagnosis. I believe Dr. Cara will readily admit that he is unable to diagnosis a hundred per cent of these gastrointestinal lesions.

The mortality from surgery, with the advent of improvements in anesthesia and the understanding of physiologic principles involved, has been extremely low and the morbidity is nil. Therefore, I think that this

method of intelligent surgical exploration of the abdomen takes precedence over the various scopes such as the gastroscope, peritoneoscope and cul-de-scope.

Dr. George Pack reported last fall at the Strassburger Memorial meeting on 50 consecutive cases of exploratory laparotomies performed at the Memorial Hospital. In only 4 cases, or 8 per cent were the findings negative. Fifty per cent of these patients had tumors and 9 of them had inoperable carcinoma. Dr. Alton Oschner and other writers have reported similar experiences with this very important surgical tool of which the patient should be given the benefit.

DR. EDWARD ROSSETT: Dr. Aste's exploratory scalpel must be sheathed, if perhaps only temporarily. To deny a mortality rate for exploratory laparotomy is an obvious error. Mere anesthesia carries a mortality rate. We must also not use an unusual example of a rare disease to set up our modus operandi for all gastrointestinal hemorrhage. An erosive gastritis cannot usually be diagnosed radiographically but can gastoscopically. Medical therapy is successful in this disease. In gastrointestinal hemorrhage whose cause may range from the esophageal lacerations of a Mallory Weiss syndrome to the hypertension of a pheochromycytoma, the use of a diagnostic scalpel must be permitted only after a vigorous and intelligent attempt to determine the diagnosis has been made, utilizing every indicated diagnostic modality from esophagoscope to blood fibrinogen. I mention pheochromcytoma because a recent exploration at another hospital in this city in such a case resulted in an ill-advised ileal resection because most of the bleeding was in this area. After recovery from exploration and resection, the diagnosis was finally made. Before the tumor could be removed the patient died of a cerebral hemorrhage. Autopsy, unfortunately, rather than operation confirmed this diagnosis.

President's Letter

YE OLDE ALMA MATER



Dr. Wood

Perhaps one may presume that many of the readers, like the writer, during the last month succumbed to nostalgic yearnings and joined the caravans trekking back to dear old Alma Maters. We are guilty, not once but twice, and thereby were doubly elated and depressed. We were greatly concerned that so many of our former class mates were so changed that they scarcely recognized us. Mirror examination at bedtime so often reveals that senescent changes are not the prerogative of one's class mates.

All was not so depressive. Inspection of laboratories devoted to specialized studies in hematology, endocrinology, cardiology and to experimentation really warmed the cockles of one's heart and harken back to the old days when such were unknown, and gave origin to a yen that will forever be denied. The fact that such facilities were not available in bygone years, offers little compensation to the feelings of inadequacy when confronted by clinical problems in daily practice.

On the other hand, all is not so rosy in the ivory towers. Education is becoming more costly. Tuition furnishes only 20% of the operating budget of medical schools and the remaining income for medical education is being derived from alumni contributions, endowments, grants and moneys from the National Fund for Medical Education and the American Medical Education Foundation. These are not sufficient and the author wonders how many of you per chance have visited the booth of the A.M.E.F. at the Chicago meeting of the A.M.A. in June? Contributions by the medical profession were displayed at this booth under the respective states and poor old Tennessee was at the bottom of the totem pole. We tried to look nonchalant as we slipped away.

During the ensuing year, we hope to see some changes made. As you may know Tennessee, unlike many of the states, has not yet organized a state committee for the procuring of funds for the A.M.E.F. Many of the states have not only organized such committees, but a few have passed regulations that include a donation to the A.M.E.F. in their state dues. Thus, Illinois last year was enabled to give to the A.M.E.F. $160,000.00. This amount along with a contribution from other states will be distributed to the medical schools of the United States, not according to the state's contribution but according to the studied needs of the institution. It is possible, however, for anyone to make an outright gift to the university of their choice through the A.M.E.F.

Thus the need of an organization in Tennessee to further the aims of this worthy cause is obvious. Physicians are aware of the fact that their education was in part the gift of either the taxpayer of their respective states or of some foundation. Physicians are also anxious as are others that the federal government is not made the agent for maintaining medical education. Therefore it seems that we must help industry and other free enterprise agencies to keep our medical schools financially solvent.

We wonder how many have stopped to think that aid given to our schools in the past, has been somewhat lop-sided. Medical education, engineering, chemistry, and departments in the various sciences are often beneficiaries of grants, bequests, or outright gifts. How often is it. though, that the old liberal arts department is named as the recipient of a donation? This may result in a tragic situation. What good is a narrow educated medical teacher or physician? How is he to develop into a broad understanding professor or practitioner without the humanities? How can one even have an opportunity to be taught these fundamentals without the establishment of a solid liberal arts department? It may pay

(Continued on page 258)

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JUNE, 1956

EDITORIAL

NUCLEAR MEDICINE

Nuclear medicine will occupy an even more important niche in the years to come. We in Tennessee are not unmindful of the tremendous impact that the Oak Ridge National Laboratory has made on the American scene. During the past 5 years the increase in isotope shipment has been so great that it has almost doubled each year. Furthermore, 70 per cent of the dollar value of these shipments represented medical use. John H. Lawrence who has been among the pioneers in the field of nuclear medicine has summarized much of the present knowledge.[1]

Probably familiar to all physicians is the use of I^{131} in the diagnosis of Graves' disease and thyroid cancer and the use of P^{32} in the treatment of polycythemia vera, chronic leukemia and allied diseases. Less well known are the uses of P^{32} and Cr^{51} in the measurement of blood volume; Fe^{59} in the study of red blood cell production and differentiation of anemias; and radiocolloids in the palliation of pleural and peritoneal carcinomatosis. Finally, the new sources of external radiation are well known. These include long-lived isotopes such as radiocobalt and radiocesium as well as accelerators such as the betatron, the bevatron, the synchrotron, and the synchrocyclotron for the deep therapy of cancer.

For a long time physicians and surgeons have recognized the inaccuracies associated with dependence on red blood counts, hemoglobin values and hematocrit studies. Knowing the red cell volume and hence the oxygen-carrying capacity of the blood can be of real importance and with radioactive isotopes this can be determined in the laboratory or office. Such knowledge is particularly important in evaluating patients for surgery.

Determining the life span of a red blood cell may seem a long way from the study of problem anemias, but Huff and others[2] using radioactive isotope tracer studies have discovered certain patterns of uptake. By studying these patterns the physician can understand not only the fate of the red cells but also can classify some of his problem anemias. The correct medical or surgical approach to anemia becomes clear only when the anemia is properly understood.

Lawrence speaks with paternal pride of the work with P^{32} in polycythemia vera and certain of the leukemias. He first treated a patient with this isotope 20 years ago. Lawrence now believes that the life expectancy in polycythemic patients treated with radioactive phosphorus is almost the equivalent of diabetics treated with insulin and pernicious anemia patients treated with liver and cyanocobalamin (vitamin B_{12}). Radioisotopes have shown some promise also in the treatment of leukemia.

Tracer studies with radioactive water are not applicable for clinical use today. How-

[1]Lawrence, John H: Isotopes and Nuclear Radiations in Experimental Medicine, A.M.A. Arch. of Int. Med. 97:680, 1956.

[2]Huff, R. L., Hennessy, T. G., Austin, R. E., Garcia, J. F., Roberts, B. M., and Lawrence, J. H.: Plasma and Red Cell Iron Turnover in Normal Subjects and in Patients having Various Hematopoietic Disorders, J. Clin. Invest. 29:1041, 1950.

ever, our future knowledge of body water and body fat distribution, as well as the management of ascites and edema, will be based on studies with this radioisotope in the laboratory and at the bedside.

Finally, the new synchrocyclotron is now being used to produce radiation hypophysectomy in patients with far advanced metastatic carcinoma of the breast. Surgical hypophysectomy has been utilized abroad in this country for treatment of such patients. This new nuclear tool apparently produces as marked depression of pituitary function as the scalpel. However, it is too early to evaluate the clinical usefulness of this procedure.

We are on the threshold of a new era in medicine. Some of us can remember the excitement when crude liver changed the prognosis in pernicious anemia, and insulin made diabetics survive and live useful lives. Many of us can remember the thrill of watching M & B 693 and the later sulfonamides change the course of many infectious diseases. More recently the antibiotics have become the "wonder drugs." Now we can see at close range a new horizon. Let us not be complacent about the wonders of nuclear medicine as they unfold. Who knows what miracles will occur? What other profession is so intensely and everlastingly exciting?

A. B. S.

★

HEALTH INSURANCE— WOULD AN INDEMNITY PLAN WORK?

Health insurance has become a big business in its coverage of millions of our citizens, and surely is here to stay until and if government takes over, which now seems likely to be postponed until the time of a major depression. It is but a matter of 25 years ago that our major policy forming body, the A.M.A., looked askance at the beginnings of health insurance. Now there is little question among members of the profession as to the need for insurance, and organized medicine has given it more than mere sanction.

But such insurance fortunately has not been set firmly in a mold. As with all things new there must develop an experience by trial and error. This is especially true in the insurance field when new areas are opened up without a background of actuarial experience. Conservatism must rule until experience is built, and this takes time. There has been experimentation in the field of health insurance and more appears to be in the offing.

New questions are arising as between *service* and *indemnity* types of insurance. The first is the plan by which a maximum fee schedule is agreed upon by participating physicians to apply to those having an income below a specified ceiling. The Tennessee Plan is an example of this. Actuarially speaking this was a sound predictable plan, certainly until statistical experience was obtained. However, the medical profession mainly, and the clientele to a lesser extent, have in their experience developed a mounting dissatisfaction with the *service* type of insurance and are eyeing more and more the *indemnity* type as sold by some insurance companies. In such plans the doctor is not bound by the policy's fee schedule.

Last year McBee,[1] executive director of Blue Cross-Blue Shield of Texas, considered the pros and cons of both types of insurance. He reviews the arguments for the service plan as it developed to provide adequate medical attention for the *medically indigent* and as a bulwark against a growing demand for socialized medicine by laboring and low income groups. It provided for a fixed fee schedule to apply to certain income limits, the fees set by spokesmen for the profession. Therefore the members of the profession were expected to be honest and to be men of their word and not to charge in excess of the set fee just because a thrifty policyholder had insurance and had saved a little money. A *service plan* is essentially the medical profession's plan and should therefore stimulate continued interest in health insurance.

Experimentation with *service plans* has, however, revealed its weak points, and these have led McBee to evaluate the *indemnity plan.* The dissatisfaction of physicians with the service plan relative to such

[1]McBee, W. R.: Health Insurance Answer—Service or Indemnity, Texas J. Med. 52:252, 1956.

From the Executive Secretary

ORGANIZATIONAL NEWS

County Medical Society Officers Conference Nashville—September 23

● In keeping with the action of the House of Delegates, the first County Medical Society Officers Conference will be conducted in Nashville on Sunday, September 23rd in the Commodore Room of the Andrew Jackson Hotel. The purpose of the Conference is to present information and subjects that will be of real importance to County Medical Society and State Medical Association Officers.

Program Now Practically Completed

● A number of outstanding speakers have been obtained for the program. Organizational activities and public service will be the main items discussed on the program. Such subjects as "Good Relations Between Newsmen and Physicians" will be given by an outstanding Editor of one of Tennessee's large newspapers. "What's in the AMA for You" will be the subject presented by Mr. Tom Hendricks, Secretary of the Council on Medical Service of the AMA. "The Doctor and the Law" will be the subject presented by Mr. Joseph Stetler, Director of the Law Department of the American Medical Association. Other public relations subjects will be "The Basic Eight—A Check List for County Society Public Service Programs." "The Tennessee Ten—Your Public Service Program." Dr. John Burkhart of Knoxville will present "Educating Your Society to Good Public Service Practices."

Outstanding Speaker on Ethics

● An outstanding physician with a national reputation is being obtained to speak on the subject of "Ethics."

Business and Entertainment

● The all important conference will be held on Sunday, following the Vanderbilt and University of Georgia Football game which will be played in Nashville on Saturday night preceding the meeting. All Officers of County Medical Societies and all Committee Chairmen of the State Medical Association together with the Officers of the TSMA are being invited. Any other persons who are committee Chairman in their County Medical Societies and who wish to attend are invited. Any interested member of the State Medical Association who desires to attend this Conference will be welcome. Representatives of County Society Auxiliaries and Officers of the State Woman's Auxiliary will be invited.

Such Conferences Well Received Elsewhere

● County Medical Society Officers Conferences have been conducted in other states and have proven to be of outstanding value. Since this is the first conference to be held in Tennessee, it is hoped that the officers of the county medical societies will support the meeting with their attendance, since the information to be presented will be of outstanding value in the operations and workings of each county society.

TSMA Commended by Medical Service Society of America

● The following Resolution has been received:

WHEREAS that the Tennessee State Medical Association, through its Executive Secretary, Officers and Members, has cooperated with and been of material and moral assistance to the Memphis Chapter of the Medical Service Society of America in its efforts to be of service to the medical and allied professions . . .

WHEREAS the Medical Service Society of America in 11th annual convention assembled would like to commend and thank said Tennessee State Medical Association for its efforts to promote a better understanding of and relationship between the physicians and detailmen of America both on the local and national level . . .

NOW THEREFORE, BE IT RESOLVED that this convention extend its greetings and salutations to all Members and Officers of the Tennessee State Medical Association and cause this resolution of appreciation to be executed.

Doctors and Lawyers Form Inter-Professional Code

● The Legal Liaison Committee of TSMA meeting with representatives of the Tennessee Bar Association have formulated an Inter-Professional Code of Cooperation. The first draft of the Code has been drawn for study and will be further reviewed by the Legal Liaison Committee, and the Board of Trustees, and eventually the approval of the House of Delegates. The preamble of the code states the following: "Acknowledging that lawyers and physicians are each members of a profession dedicated to the public interest and concerned with the problems of persons in need of the combined services of the two professions, and in order to create a better understanding and closer relationship between the legal and medical professions to the end that each may better serve the other and the public, we, the members of the Bar Association of Tennessee and the Tennessee State Medical Association, do hereby adopt the following Declaration of Principles as standards of proper conduct for lawyers and physicians in their inter-professional relations.

Code Has Six Sections

● The Code establishes six sections of cooperation. The first is Inter-Relationship. This section states that the medical profession is primarily concerned with the diagnosis, treatment and care of the patient. The legal profession is primarily concerned with the preservation and protection of the rights of the client. This section sets forth certain rules to be followed by doctors and lawyers in their mutual cooperation.

Preliminary Conference

● The second section deals with the Preliminary Conference prior to Court Proceedings. This section deals with the medical questions involved in controverics.

Records and Reports

● The Third section is one of the more important ones and deals with the Records and Reports to be submitted by doctors and lawyers in questions involving court action.

Another section deals with the fee of an Expert Witness. The section states that a reasonable expert fee is a proper and necessary item of expense in litigation involving medical questions.

Another section deals with Court Attendance and sets forth the rules for lawyers and doctors arrangements in court appearances.

The final section deals with the Administration of the Code and states that six members of each profession shall serve on a Committee to be known as "The Inter-Professional Code Committee." The Code has yet to be studied and approved, but the first draft is a long step in adopting a method that will better guide doctors and lawyers in their professional relationships.

TSMA Now Has Fifth Delegate in AMA House

● Dr. Ralph O. Rychener, Memphis, has been elected a delegate to the House of Delegates of the AMA, representing the section on Ophthalmology. The TSMA has its three regular delegates in the House already, and with the appointment of Dr. Rychener, it gives Tennessee five representatives in the AMA House. Dr. Hollis E. Johnson, Nashville, is the section delegate from the College of Chest Physicians.

Public Service

THE TENNESSEE TEN

"Final Version?" HR 7225

● Controversial cash disability payments have been stripped from the new proposed Social Security Amendments Bill by the Senate Finance Committee as Congress swung into high gear in an effort to speed through a heavy slate of legislation before adjournment, probably this month.

Medical payments, as a separate category under public assistance, would allow $4 per month for adults and $2 for children from Federal funds, provided states would match this dollar for dollar. This action came May 23 in one final meeting of the Committee before it reviewed, for the last time, the language of the bill.

The Committee's final version brings about 250,000 more persons, including lawyers and dentists, under social security. By dropping out disability payments and restricting payments at age 62 to widows, the Committee was able to avoid a scheduled increase in social security taxes needed to finance these proposals.

A.M.A. sources in Washington said Senators Morse and Long are keynoting a drive to have disability payments returned to HR 7225. No Senate action on the bill had been taken at press time.

Labor Committee Health Bill

● The Senate labor committee has endorsed a five-point health bill extending the Hill-Burton hospital-clinic building program and providing training agents in the health field as follows:

1. Traineeships for graduates and/or specialized training in public health for physicians, engineers, nurses and other professional public health persons.
2. Traineeships for nurses to teach or serve in administrative or supervisory jobs.
3. Grants to states for practical nurses and other auxiliary personnel, under the U.S. Office of Education.
4. State grants to finance research projects and train personnel for improved mental health programs.
5. Extension of Hill-Burton for two years beyond July 1, 1957.

Indigent Program Film

● Production is underway on a 13-minute film for television, showing how Tennessee's Indigent Hospital Service law operates, what it needs for the future, and how important it is that all counties vote to participate in the plan.

Sponsors are the Tennessee Heart Association; American Cancer Society, Tennessee Division, Inc.; Tennessee Hospital Association; Tennessee Department of Public Health; and TSMA.

The Public Service Committee is supervising the production with the Public Service Director in charge of writing and directing the film.

A number of capable professional persons are donating their services. Release date is late August or early September. Working on the film are:

Capable Staff

● Photography and editing: Father Ned Elliot and Dr. W. N. Cook, both of Columbia; Technical Assistance for Scripts: Miss Helene Ewing, Department of Public Health; Production Consultants: Paul Moore and Dan Grice, Department of Conservation; Script for Governor Clement's Statement: Douglas Fisher, L. L.B.; Executive Counsel to the Governor; Narrator: James Herbert Bateman, L. L.B., Nashville; Scripts: Mrs. Mary Jane Kohrs, Public Service Secretary.

Dr. Donald Lewis (Ph.D., Columbia University), who plays the part of an indigent patient, was completely outfitted for $1.25. His shoes, hat, jeans and shirt cost only 50¢. Greatest single expense was a new pair of galluses. Cost: 75¢.

Contracts for laboratory processing and sound have been let to Calvin Productions, Kansas City, Mo.

In addition to release for television, color copies of the film will be available for showing to medical societies, civic groups and other audiences. Distribution will be arranged through sponsoring agencies and other interested groups.

Total cost of the film is estimated at $2,200, including copies for distribution.

Health Project Contest

● The Health Project Contest sponsored by the TSMA Woman's Auxiliary has proven to be one of the most successful endeavors of this type in the Nation. The idea of contests for high school youths is an old one. The essay contest, a hardy perennial in the American public school tradition, served as the forebearer of the Auxiliary Health Project which enters its fourth year this fall when the schools open.

The unique feature of the contest is that it reaches many times over the number of students attracted to the essay contest. The Health Project is a group endeavor, requiring the cooperation of an entire class, an entire high school, and many times, an entire community.

Participants must first determine a school or community health need and then set out to meet it. Very often the story behind the project is dramatic, human, and heartwarming.

Such was the case this year when the girls' health classes at Lee College Academy, a high school connected with Lee College in Cleveland, Tennessee, set out to educate their school and community to the dangers of cancer and the advisability of regular physical check-ups to detect the disease early.

A living example of the disease having been discovered too late was Veral Anthony, a twenty-one-year-old Californian, then a sophomore at Lee College. It was Anthony who spurred the youthful contestants to put on a cancer detection campaign that would have done credit to any group or organization. Veral Anthony died last month, shortly after his final examinations. He leaves a young widow and an infant son. The story of his pilgrimage to East Tennessee from the West Coast, "...to learn more of God," was carried in The Nashville Tennessean Magazine, Sunday, May 6, a month before his death. How Anthony fulfilled his purpose in life was told in the newspaper's Sunday magazine section June 24, shortly after Reporter George Barker, author of both stories, learned of his death.

things as an expanding economy without a change in wage ceilings in insurance, the holding of multiple policies, lack of recognition of joint incomes by man and wife, income outside and above wage ceilings, is eliminated with the indemnity plan. (These irritations have led doctors to break their word and to make charges above those set in the service plan with resulting ill-will and fractured public relations between doctors and patients and/or employers.) Many physicians will accept the indemnity fee schedules for low-income families and thus actually provide a service plan. Indemnity type of health insurance is more flexible in permitting of varying fees dependent upon geographic location,—higher overhead in cities and therefore higher fees, and a differential between the fees of a specialist and a general practitioner. The indemnity type does not involve ponderous evaluation and re-evaluation of fee schedules by committees of the profession but can be readily changed by the company on actuarial experience. Indemnity plans permit a freer choice of physicians for there need be no list of participating doctors.

Recently Wisconsin Blue Shield has initiated a startling experiment in Racine, Wisconsin, described in *Medical Economics* as "Blue Sky" Blue Shield.[2] In this plan, as outlined, the insurer will pay *fees in full*, there being no fee schedules, either service or indemnity, and no income ceilings. There are limits, however, as,—120 days of in-hospital care only, $3.00 for office and $5.00 for house calls. Fees will be paid if "reasonable" or "customary" and may be challenged by Blue Shield for a review by a committee of the medical society.

As would be expected the premiums will run 30 per cent higher than usual, roughly about $90.00 annually per family. This is truly an experiment and those interested in insurance will await the results with interest. It will try the self-restraint of some of the doctors. Your editor would not wish to be on the committee which decides that Dr. X's charge of $500.00 is reasonable for a gastric resection because of his specialized training, and that Dr. Y, having had no more than a rotating internship should accept only $250.00 for the same operation. There will be some "headaches."

In speaking of such plans there is one organization which probably has had as valuable an actuarial experience as any insurance company. This is the U.M.W.A. After a number of years experience of a fee for service policy it probably has the answers to a lot of apparent unknowns.

Patterns of health insurance will change, of that one can be certain, and it will be an interesting evolution to watch.

R. H. K.

[2]Lindsey, John R.: They Call It "Blue Sky" Blue Shield, Med. Econ., p. 104, May, 1956.

NOTE: *All members of the Association having occasion to seek aid for indigent cancer patients should refer to the section on Announcements in this issue, and file this issue or at least those pages for future reference and instruction.*

DEATHS

Dr. Rufus Eddie Standefer, Dunlap, died May 24th at the Sequatchie General Hospital. He was 73.

Dr. C. P. Wilson, Sr., Sevierville, died May 30th at the Fort Sanders Hospital in Knoxville. Dr. Wilson was 64.

Dr. James P. Moon, 74, Winchester, died May 28th at the Baptist Hospital in Nashville. He was director of the Franklin-Coffee County Health Department.

Dr. George E. Vaughan, 79, Southside, died June 1 at his home.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The Society held its meeting on June 7 in the Interstate Building. The scientific program consisted of the following, "Newer Aspects of Spinal Anesthesia" by Dr. Robert Baldwin, "Hemorrhagic Diseases and Blood Coagulation" by Dr. David Stump, and an interesting case report by Dr. Cecil Newell.

Dyer-Lake-Crockett County Medical Society

The Society conducted its regular monthly meeting on June 6 at Boyette's Dining Room at Reelfoot Lake. Between thirty and thirty-five doctors were in attendance and the Society honored the sixteen men who had previously been their guests on the scientific programs during the last twelve months.

The scientific program consisted of a paper on "Recurrent Upper Respiratory Infections" by Dr. Sam Sanders of Memphis and one on "Common Diseases and Blood Coagulation" by Dr. David Stump.

Knoxville Academy of Medicine

The Society held its regular meeting on June 12 in the Academy of Medicine Building. Dr. John Dougherty presented a short movie. The scientific program consisted of a paper, "Present Status of Hiatus Hernia" by Dr. C. Harwell Dabbs. The discussion was led by Dr. D. H. Waterman.

Nashville Academy of Medicine and Davidson County Medical Society

The Society met for its regular monthly dinner meeting on June 12 at Vanderbilt University Hospital. The scientific program consisted of a panel discussion on "Limitations and Laboratory Pitfalls in the Practice of Medicine." Dr. Albert Weinstein was the moderator; other participants were Dr. Robert C. Hartmann, Dr. Vernon Knight, Dr. Ann Minot and Dr. Lloyd Ramsey.

The Society also acted on revisions in its Constitution and By-Laws.

Sullivan-Johnson County Medical Society

The monthly meeting of the society was held at the Ridgefields Country Club in Kingsport. The scientific program was presented by Dr. Louis Shoffner, Department of Surgery, Bowman Gray School of Medicine.

Memphis-Shelby County Medical Society

The Memphis-Shelby County Medical Society held its regular monthly meeting on April 3rd in the Institute of Pathology auditorium. A discussion was given on "The Physician and the Income Tax" by Mr. Lucian Minor, CPA and Mr. Clyde Lambert, CPA. There were 127 members present.

The Society has announced the appointment of Mr. Leslie Adams to handle the business and public relations of the 570 member organization, and to act as the Society's Executive Secretary. Mr. Adams has wide experience in public relations and has been a resident of Memphis for three years. Prior to moving to Memphis, he had considerable experience in radio, television, advertising, public relations and newspaper work throughout the South and Southwest.

Mr. Adams was born at Fort Worth, Texas. He served 3½ years in World War II and is married and has two children.

Roane County Medical Society

The regular monthly meeting was conducted on May 29 in the dining room of the Oak Ridge Hospital. Dr. Robert R. Bigelow of Oak Ridge presented the subject, "Treatment of Thyroid Carcinoma."

Consolidated Medical Assembly

Dr. Ralph Bowers, Chief of Surgery of Kennedy General Hospital, Memphis, addressed the Consolidated Medical Assembly at its monthly dinner meeting at the New Southern Hotel on June 5. His subject was "Surgical Treatment of Cirrhosis of the Liver."

Five-County Medical Society

The Five-County Medical Society and Auxiliary recently met at the Cookeville Country Club. Dr. R. B. Wood, Knoxville, President of the Tennessee State Medical Association, was the guest speaker. Following the dinner and meeting, a delightful social hour was enjoyed.

NATIONAL NEWS

Veterans' Pensions

A presidential commission's report on veterans' pensions that also goes into the subject of non-service connected medical benefits is stirring up another controversy.

The President's Commission on Veterans' Pensions, headed by General Omar Bradley, World War II leader and postwar Veterans Administra-

tor, conducted a study covering more than a year in time and a wide range of subjects. It produced a 415 page report and a total of 70 recommendations.

The seven man commission's report has this basic premise: military service in time of war or peace should be treated as discharging an obligation of citizenship and not of itself as a basis for future government benefits.

The commission made this additional point: ". . . under conditions of modern technology and warfare, the national defense might be served equally well by a civilian in a scientific laboratory or a war plant as by a uniformed serviceman—and in view of total war and atomic weapons, perhaps with greater personal hazard to the civilian. This further suggests that the special needs that veterans have because of military service should not be confused with the needs that all citizens have in common for such things as education, health services and economic security."

With this in mind, the commission proposes the gradual elimination of nonservice connected benefits and observes: "Their justification is weak and their basic philosophy is backward looking rather than constructive." Such benefits, it adds, should be limited to a minimum level and retained only as a reserve line for veterans who fail to qualify for basic protection under Old Age and Survivors Insurance (Social Security).

The commission then goes one step further by recommending an end to the present automatic "presumption of service-connection" procedure. Now, presumption of service connection is automatic and mandatory for certain diseases if the condition is diagnosed within a specific period of time following discharge. Instead, the commission would substitute medical determination for chronic and tropical diseases, psychoses, tuberculosis and multiple sclerosis, with each case decided on its own merits.

Other recommendations: (1) increased reliance on the OASI system for certain veterans benefits, (2) prompt counseling of all veterans placed on compensation rolls as to VA and federal-state rehabilitation programs, and (3) requirements of reasonable medical or surgical treatment before payment of compensation.

Representatives of Veterans groups called before the House Veterans Affairs Committee to comment on the Bradley study complained that some of its proposals would be "extremely destructive" to certain aspects of veterans compensation.

Military Dependents Medical Care Bill Now a Law

Before the end of the year hundreds of thousands of dependents of military personnel, living in all parts of the country, should be receiving their medical care from private physicians and in private hospitals under the new program authorized this year by Congress. Although several groups of dependents will be entitled to medical care, only wives (or husbands) and children of men on active duty will be certified for civilian care. The others will be admitted to military medical facilities on "availability of space" basis. While generally spouses and children of active duty personnel will have a choice of private or military care, there is this limitation:

Dependents will be required to pay for care in military facilities, subsistence and "in-hospital" charges (set by Secretary of Defense and currently $1.75 per day); for private care, the same fees or the first $25, whichever is the larger. The time limit on private care is 12 months.

The law makes the following provisions:

Care in military facilities to include: 1. Diagnosis, treatment of acute medical and surgical conditions, treatment of "contagious diseases," immunization and maternity and infant care. 2. Hospitalization for nervous and mental disorders, chronic diseases or elective medical and surgical treatment *but only in "special and unusual cases"* and for not more than 12 months.

Private care will include: 1. Hospitalization in semiprivate accommodations up to one year for each admission, including all necessary services and supplies furnished by hospital. 2. Medical and surgical care incident to hospitalization. 3. Complete obstetrical and maternity service, including prenatal and postnatal care. 4. Physician's or surgeon's services prior to and following hospitalization for bodily injury or surgery.

Under the private care program, some services may be furnished outside the hospital, such as surgery in a doctor's office, X-rays or laboratory tests, "but not what is normally conceived to be out-patient care." If experience shows they can be afforded, additional services may be authorized, but whatever the scope of private care, it cannot exceed that furnished in military facilities. Outpatient care will be furnished by military facilities, but "uniform minimal" charges may be imposed as a restraint on excessive demands.

MEDICAL NEWS IN TENNESSEE

University of Tennessee Memorial Research Center and Hospital

The President of the University of Tennessee has requested the President of the Tennessee State Medical Association to extend an invitation to all doctors throughout the state to be present at the dedication of the new University of Tennessee Memorial Research Center and Hospital to be held on Wednesday afternoon, July 18, 1956 at 2:00 P.M. in the auditorium of the Hospital in Knoxville.

Hospital Board Sees Need for Inspectors

The State Hospital Licensing Board has agreed to ask the 1957 General Assembly for sufficient funds to provide two more men for the Hospital inspection program.

Dr. R. H. Hutcheson, Health Commissioner, said it is impossible for the one inspector which the Board now has to do an adequate job. He pointed out there are about 200 hospitals, 200 nursing homes and 26 homes for the aged which theoretically must be inspected.

In making these suggestions for additional hospital inspection, it will carry out the Resolution introduced in the House of Delegates of the Tennessee State Medical Association, the Resolution being adopted at the April 1956 meeting in Memphis.

University of Tennessee College of Medicine

Seven Memphis physicians and one from West Memphis have been appointed as assistants on the staff. They are: Dr. Paul T. Drenning, in Medicine; Dr. D. H. James, Jr., Dr. Charles Walter Brown and Dr. Chris N. Christu of West Memphis, in Pediatrics; Dr. John B. Hamsher, in Urology; Dr. A. H. Crenshaw, Dr. Lee W. Milford, Jr. and Dr. Rocco A. Calandruccio, in Orthopedic Surgery.

★

Dr. Robert Greenblatt, professor of endocrinology at the University of Georgia, recently visited the Division of Obstetrics and Gynecology. He made a number of talks before medical groups in Memphis and addressed the Memphis Obstetrical and Gynecological Society where he spoke on the subject "Gynecological Endocrinology."

★

Dr. F. T. Mitchell, of the Division of Pediatrics, has been named a "Distinguished Alumnus Member" of the College's Chapter of Alpha Omega Alpha, National Honorary Medical Society.

★

Dr. Robert A. Woodbury, of the Division of Pharmacology has been awarded a grant of $6,000 from the American Heart Association for the study of drugs on heart muscle. The action of several sympathomimetic drugs and serotonin will be investigated using the papillary muscle technic.

★

Construction is scheduled to begin soon on a new $159,500 Les Passees Diagnostic and Treatment Center for Cerebral Palsied Children. A portion of the construction funds was provided by the Women's Philanthropic Organization; the remainder will come from the Hill-Burton Act Fund. The federal grant for the one-story center was made to the College of Medicine which will give Les Passees a 99 year lease to operate.

★

A post-graduate course in abdominal surgery will be given July 25 to 27, under the direction of Dr. Harwell Wilson.

Meharry Medical College

On June 5, as part of the celebration of the 80th Anniversary of the Medical School a Medical Symposium was held. Through the generous support of the Upjohn Company, authorities in their respective fields were brought to Nashville for this Symposium from all parts of the Country. Those who took part in this program were Doctors Robert A. Good, F. C. Robbins, John M. Adams, Samuel M. Feinberg, Theodore K. Lawless, Herbert L. Blumbart, Maxwell Finland, John L. McKelvey, C. Paul Hodgkinson, Lester R. Dragstedt, Edward L. Howse and U. G. Dailey.

Middle Tennessee Heart Association

The annual dinner meeting was held on May 31, with Dr. Rollin A. Daniel, Jr., outgoing President in the chair. Dr. William T. Bradley, general Chairman of the 1956 Heart Fund, was honored for his efforts. Dr. Joseph E. Acker of Knoxville described the Work Classification Unit, which has been established under the East Tennessee Heart Association in Knoxville. Dr. Robert W. Quinn, Nashville, was named president-elect.

Upper Cumberland Medical Society

The Sixty-Second Annual Program of this Society was held at Red Boiling Springs, June 26 and 27 with the President, Dr. R. C. Kash of Lebanon presiding.

The program consisted of the following papers:

"Cancer of the Head and Neck," by Dr.

Kirkland W. Todd, Jr., Nashville

"Coronary Disease," by Dr. Thayer Wilson of Carthage

"Indications for Cardiac Surgery," by Dr. George W. Holcomb, Nashville

"Management of Upper Gastro-Intestinal Hemorrhage," by Dr. Jack L. Clark, Cookeville

"Medical Management of Duodenal Ulcer" by Dr. A. B. Harwell, Nashville

"Diabetes in Children" by Dr. E. E. Wilkinson, Nashville

"The Importance of Hoarseness in Diagnosis," by Dr. William G. Kennon, Nashville

"The Diagnosis and Management of Gastritis," by Dr. William G. Card, Nashville

"A 5-Year Review of Surgery of the Aged at Cookeville General Hospital," by Dr. Kenneth Haile, of Cookeville

"The Disabled Child and the Home," by Dr. Joe Burd, Nashville

"Treatment of Pelvic Malignancy," by Harry H. Jenkins, Knoxville

"Uses of Cobalt and Conventional X-ray Therapy," by Dr. John Beveridge, Nashville

"Acute Rheumatic Arthritis As a Manifestation of Systemic Disease," by Dr. Fred Goldner, Nashville.

The Presidential Address—"Method of Developing a Better Doctor-Patient Relationship," by Dr. R. C. Kash, Lebanon

"Facial Bone Fractures," by Dr. Greer Ricketson, Nashville

"Total Patellectomy—Indications and Results" by Dr. John J. Killeffer, Chattanooga

"Radical Surgical Treatment of X-ray Burns," by Dr. Beverly Douglas, Nashville

"Obstetrical Analgesia and Anesthesia" by Dr. R. C. Gaw, Gainesboro.

Middle Tennessee Medical Association

The 123rd semi-annual meeting of the Middle Tennessee Medical Association was held on May 17th at the Sparta Hotel, Sparta. An outstanding scientific program was presented and approximately 75 doctors were in attendance. Dr. Samuel H. Hay, Murfreesboro, President of the Organization, presided.

PERSONAL NEWS

Dr. Chester K. Jones, Jackson, has been named President of the Tennessee Society of Pathology.

Dr. J. O. Walker, Franklin, has announced his candidacy for election as direct representative to the State Legislature.

Dr. Ira L. Arnold, Chattanooga, has been named vice-president of the Tennessee Academy of Ophthalmology and Otolaryngology.

The Tennessee Radiological Society recently elected the following officers: **Dr. Ben R. Mayes,** Nashville, President; **Dr. W. E. Scribner,** Kingsport, Vice-President; and **Dr. George K. Henshall,** Chattanooga, Secretary-Treasurer.

Dr. Herbert C. Francis, Nashville, was named Councilor to the American College of Radiology for Tennessee, and **Dr. Walter Hankins,** Johnson City, was named Alternate Councilor.

Dr. Joe G. Burd has moved his office to 203 Louise Avenue, Nashville, with practice limited to orthopaedic surgery.

Dr. Harold H. Fry, Paris, has joined the staff of Nobles Hospital.

Dr. Sells Blevins, Jonesboro, has announced the opening of his office for the practice of medicine and surgery, in Jonesboro.

Dr. C. M. Talbott, Chattanooga, has announced that he will become associated with **Dr. Stewart Lawwill, Sr.** and **Dr. Stewart Lawwill, Jr.** He will limit his practice to diseases and surgery of ear, nose and throat.

Dr. John L. Armstrong, Somerville, recently appeared on a Nashville television program.

Dr. E. Converse Peirce, II, Knoxville, presented a paper entitled "Diagnosis and Surgical Treatment of Aneurysms" at the meeting of the International College of Surgeons in Chattanooga; he also spoke before the Society for Artificial Organs at White Sulphur Springs, West Virginia.

Dr. John B. Youmans, Nashville, recently addressed the Chattanooga Kiwanis Club.

Dr. R. L. Jones, Chattanooga, recently attended a national Postgraduate Convention in Dallas, Texas.

Dr. Denton Norris, Livingston, has been named County Chairman for the American Cancer Society Crusade.

Dr. Wade H. Boswell, Knoxville, has attended the American Academy of Neurology in St. Louis.

Dr. Vernon Knight, Nashville, was the recent speaker before the Hamilton County Tuberculosis Association.

Dr. William E. Allison, Nashville, has been named Medical Director of the Nashville Regional Blood Center.

Dr. W. W. Winters, Bolivar, has announced his retirement from the practice of medicine.

Dr. Albert S. Easley, Chattanooga, was the recent guest speaker before the Woman's Auxiliary

of the Bradley County Medical Society in Cleveland.

Dr. E. C. Crafton and **Dr. J. W. Hall** of Trenton, and **Dr. Joe Henderson** of Alcoa, enrolled for a three day postgraduate program in fractures at the University of Tennessee College of Medicine in Memphis.

At the annual meeting of The American College of Physicians, in Los Angeles, April 16, it was announced that **Dr. Hall S. Tacket** of Memphis had been elected to Fellowship, and **Doctors Edwin Wayne Gilley** of Chattanooga and **Ben David Hall** of Johnson City to Associateship.

Dr. George K. Carpenter, Nashville, and **Dr. Moore Moore, Jr.,** of Memphis, attended the recent President's Regional Traffic Safety Committee Meeting at Miami Beach, Florida. Dr. Moore represented the College of Surgeons since he was Chairman of the Tennessee Trauma Committee. Dr. Carpenter represented the Tennessee State Medical Association.

Dr. M. E. Thompson, Oneida, was recently honored on a special day called the "Dr. M. E. Thompson Day."

Dr. P. D. Jones, Milan, was elected President of the Staff of Milan Hospital. **Dr. James O. Fields** was named Vice-President and **Dr. P. G. Williams,** Secretary.

Dr. George A. Zirkle, Knoxville, was the recent speaker before the Medical Assistants Association of Knoxville.

Dr. Bernard M. Zussman, Memphis, recently addressed the Sertoma Club, at the Peabody Hotel.

Dr. Laurence A. Grossman, Nashville, has been installed as President of the Middle Tennessee Heart Association. New Directors are **Dr. George Brothers, Dr. Douglas Riddell, Dr. James J. Callaway, Dr. Rudolph A. Light,** all of Nashville.

Dr. Paul Golley, Chattanooga, was the recent speaker on a television program in Chattanooga entitled "Point of View."

Dr. James W. Hall, Trenton, was recently elected President of the medical staff of St. Mary's Hospital, Humboldt. Other officers are **Dr. John Jackson** of Dyer, and **Dr. Harold G. Barker** of Humboldt.

Dr. Maurice Pruitt, Chattanooga, has been appointed Chairman of a Study Committee on Alcoholism.

Dr. Carl C. Gardner, Jr., Columbia, was recently elected President of the Maury County Tuberculosis Association.

Dr. Cecil H. Kimball, Cleveland, has moved to that city to establish his practice in radiology.

Dr. James G. Hughes, Memphis, has been appointed to the National Council on Infant and Child care.

Dr. W. D. Richards, Knoxville, was the subject of a recent newspaper article concerning his fifty years in practice of medicine.

Dr. Freeman C. Hays, Chattanooga, is now associated with the Brainerd Clinic.

Dr. C. S. McMurray, Nashville, recently spoke before the Davidson County Unit of the American Cancer Society.

Dr. Robert McCracken, Nashville, was the speaker recently before the Coffee County Medical Society at Manchester.

Dr. A. M. Patterson, Chattanooga, was a featured speaker before a meeting of the Chattanooga-Hamilton County Health Council. His subject was "Doctors, Organizations and Health."

Dr. James VanBlaricum, announces the opening of his offices in Winchester for the practice of medicine. He will also practice in Cowan.

Dr. Howard Thomas has announced the opening of his office for the practice of medicine at Henderson.

Dr. Sam Hay, Murfreesboro, presided as President at the recent meeting of the Middle Tennessee Medical Association.

Dr. Ralph L. Brickell and **Dr. W. L. Wiser** plan to open their offices for the practice of medicine in Tullahoma.

Dr. Ralph O. Rychener, Memphis, has been elected Section Delegate on Ophthalmology to the A.M.A. House of Delegates.

Dr. Albert P. Isenhour, Jr., Nashville, announces the removal of his office to the Medical Arts Building, practice limited to Urology.

BOOK REVIEW

Therapy of Fungus Diseases. An International Symposium. Edited by Thomas H. Sternberg, M.D., Professor of Medicine (Dermatology) and Assistant Dean for Postgraduate Medical Education, and Victor D. Newcomer, M.D., Associate Professor of Medicine (Dermatology). 337 pages, illustrated. Boston: The Little, Brown and Company. 1955. Price, $7.50.

This is a compilation of 54 papers presented at an international symposium held in June, 1955, under the auspices of the Division of Dermatology of the School of Medicine, University of California at Los Angeles. Over 200 participants from the United States and eight foreign countries reported on many aspects of fungus diseases, but the chief emphasis was on therapy.

The fungus diseases are becoming more important as the bacterial diseases decline. Little is known of effective therapy for mycotic infections in general, and potent, specific therapeutic agents are lacking. Some extremely interesting and highly significant studies of new antifungal agents are reported. Investigations are still in the early stages, but results appear to be encouraging, and should provide a stimulus for searching out derivative agents.

There are several papers on ecology and epidemiology, as well as reports on the status of fungal diseases in eight foreign countries. This book is a valuable collection of papers to serve as

source material for those interested in the mycoses. It is regrettable that some of the papers are too briefly abstracted and they lack details and references.

L. D. Zeidberg, M.D.

Physician's Federal Income Tax Guide, 1956 Edition. By Campbell and Liberman. Channel Press, Great Neck, New York. Price, $2.50.

This is a paper bound guide for physicians in making out their income tax returns. It is in its tenth edition and needs little introduction to the thousands of physicians who have used it in the past. It is written in understandable terminology and clear definitions.

R. H. K.

ANNOUNCEMENTS

Information on Aid for Cancer Patients

The Cancer Commission of the Tennessee State Medical Association and the Professional Education Committee of the American Cancer Society, Tennessee Division, call attention to the manner in which hospitalization can be furnished indigent cancer patients.

Additional information is available from the local cancer society unit or from T. T. McLean, Executive Director of the Tennessee Division, 315 Fourth Avenue, North, Nashville.

Availability of Funds

All activities of the Cancer Society depend wholly upon funds contributed each year by the public. Consequently the activities, including hospitalization, of a Unit are determined by the amount of funds raised by that Unit and allocated for its expenditure. The quotas of many units are not realistic in proportion to its needs, therefore there are many cases when funds are not available for hospitalization.

Services Promoted by the Cancer Society

The service program of the Cancer Society Units, varying of course, includes: hospitalization, room and board, purchase of drugs, transportation, a dressings program, maintenance of comfort items through loan closets, housekeeping service, home visitation and cooperative agreements with practical and trained nurses.

Who Is Entitled to These Services

Only persons determined by the local physician, the receiving tumor clinic and the Cancer Society as being medically indigent receive the above mentioned services.

Referrals for Service

All referrals, including those for hospitalization, are made by the local physician who in a majority of cases, serves as the natural case finder. These referrals are made to the tumor clinic for diagnosis and are made on Referrals Form No. 576 and which forms are furnished by the state or local health department to the physician. These forms are not the property of the Tennessee Division and cannot be handled through the Division office.

Diagnostic Service

This is a service provided to medically indigent persons (normally not to exceed a three day period) by the Cancer Control Service of the Tennessee Public Health Department.

Securing Cancer Society Funds

After a diagnosis of malignancy has been made and eligibility and need for funds determined by the clinic, a request is forwarded to the local Unit for a specified amount, covering the specified number of days needed for the treatment of the patient. If the patient is determined to be eligible and other than a terminal case and funds are available the requested funds are authorized.

Extent of Aid Through Cancer Society Funds for Hospitalization

The total cost of hospitalization authorized for any one request cannot exceed $115.50 at a per diem rate predetermined by the cooperating hospital and the Tennessee Division.

Costs for Radioactive Therapy

Cancer Society funds are not authorized for X-ray and cobalt therapy as these costs are provided through the Cancer Control Service of the Tennessee Public Health Department.

Funds for Professional Services

No funds are allocated for professional services of any type and no person may receive Society funds for any purpose if the attending physician is receiving a fee for professional services.

Where to Send Patients for Hospitalization and Other Services

The following clinics have working agreements with the Tennessee Division whereby hospitalization is furnished by the connecting hospital or others within the community:

West Tennessee

West Tennessee Cancer Clinic, 787 Jefferson Avenue, Memphis, Tenn.

Middle Tennessee

Tumor Clinic, Nashville General Hospital, Nashville, Tenn.

Hubbard Hospital Tumor Clinic, Nashville, Tenn.

East Tennessee

East Tennessee Tumor Clinic, Knoxville General Hospital, Knoxville, Tenn.

Baroness Erlanger Tumor Clinic, Chattanooga, Tenn.

Tri-County Tumor Clinic, Memorial Hospital, Johnson City, Tenn.

In addition to the above, indigent cancer patients may receive out-patient services and diagnoses at the following clinics but no arrangements exist between the Division and the hospital for providing hospitalization:

Madison County Tumor Clinic, Jackson, Tenn.
Vanderbilt University Tumor Clinic, Nashville, Tenn.
Holston Valley Community Hospital Tumor Clinic, Kingsport, Tenn.
Memorial Hospital Tumor Clinic, Bristol, Tenn.

Summary

1. Services are limited to medically indigent persons, determined as such by:
   a. The local physician
   b. The receiving tumor clinic
   c. The local Cancer Society Unit
2. No person is eligible if fees are being paid for professional services.
3. The local physician makes all referrals to the approved tumor clinic on prescribed forms supplied by the local health department.
4. X-ray and cobalt therapy are provided by the Tennessee Department of Public Health.
5. The Cancer Society does not consider requests for funds until a positive diagnosis has been made.
6. Funds for diagnostic service are provided by the Public Health Department.
7. Allocations for hospitalization are limited to $115.50.
8. Hospitalization is not provided for terminal patients.
9. Funds for hospitalization are provided only where cooperative agreements as to per diem rates exist.

(In the event a patient needs to be referred to the clinic and resides in a county which does not maintain a health department, it will be necessary for the physician to write the Tennessee Department of Public Health in Nashville and request that these forms be forwarded to the proper person.)

American Board of Obstetrics and Gynecology

Applications for certification (American Board of Obstetrics and Gynecology) for the 1957 Part I Examinations are now being accepted. Deadline date for receipt of applications is October 1, 1956.

Application for re-examination, as well as requests for resubmission of case abstracts, must be made to the Secretary prior to October 1, 1956. Current Bulletins outlining present requirements may be obtained by writing to the Secretary's office.

International Congress on Diseases of the Chest

The Fourth International Congress on Diseases of the Chest of the "American College of Chest Physicians" will take place in Cologne, Germany, next August 19-23, 1956, under the patronage of the Chancellor, Dr. Konrad Adenauer, and sponsored by the German Federal Government, the State of North Rhine Westphalia and the City of Cologne.

Third National Cancer Conference

This will be held in Detroit on June 4, 5 and 6, at the Sheraton-Cadillac Hotel.

Annual Session of the American College of Physicians

1957—38th Annual Session, Boston, Mass., April 8-12.

Richard P. Stetson, M.D., F.A.C.P., 203 Commonwealth Ave., Boston 16, Mass., General Chairman.

Walter L. Palmer, M.D., F.A.C.P., University of Chicago Department of Medicine, Chicago 37, Ill., President.

Edward R. Loveland, 4200 Pine St., Philadelphia 4, Pa., Executive Secretary and General Manager.

1958—39th Annual Session, Atlantic City, New Jersey, April 28-May 2

James F. Gleason, M.D., F.A.C.P., 7 S. Oxford Ave., Atlantic City, N. J., General Chairman.

Southern Medical Association Golden Anniversary

The Southern Medical Association founded some fifty years ago in Chattanooga, will hold its golden anniversary celebrations there on October 1 and 2 at the Read House.

Since its founding, the Association has grown to include membership in sixteen states and the District of Columbia.

PRESIDENT'S LETTER

(Continued from page 248)

you to check into the status of your own Alma Mater and see if the cream of your liberal arts faculty may not be consistently drawn off by the larger universities and the more lucrative positions because of the lack of a few hundred dollars that might be set up in the form of a professorship which would supplement the present inadequate salary of your best talent.

R P Blood M.D.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Department, 112 Louise Ave., Nashville 5, Tennessee.

Locations Wanted

A 33 year old married physician, Episcopal. Graduate University of Maryland. Now interning in General Surgery. Priority IV. Available July 1, 1956. LW-208

◆

A 28 year old single physician, Catholic. University of Tennessee graduate. Desires general practice in community over 5,000. Available July, 1956. LW-207

◆

A 28 year old physician, Protestant, graduate Vanderbilt University. Now taking residency in Pediatrics. Priority IV. Desires pediatric practice, clinical or associate, in small or medium sized community in East Tennessee. Available August 1, 1956. LW-220

◆

A 27 year old, single physician, Presbyterian, graduate University of Tennessee. Desires general practice in community of 2,000 to 25,000. Available June, 1956. LW-223

◆

A 33 year old, married physician, Methodist, graduate University of Tennessee. Three years Urology—Board eligible. Desires urology practice in clinic, assistant or associate. Available July 1, 1956 LW-225

◆

A 29 year old, married physician, Methodist, graduate University of Louisville. Now interning. Desires general practice, assistant or associate. Available July, 1956. LW-227

◆

A 28 year old, married physician, Catholic, desires hospital in which to continue residency in GYN-OB. Native of Honduras. Available July, 1956. LW-228

◆

A 36 year old, married physician, Protestant, graduate George Washington University. Taken Part I American Board of Surgery. Desires general practice with surgery, clinic, assistant or associate or industrial in community 3,000 to 300,000. Available now. LW-230

◆

A 37 year old, married physician, Lutheran, graduate University of Tennessee. Now interning. Desires general practice in any sized community in Middle Tennessee. Available July, 1956. LW-231

◆

A 32 year old, married physician, Protestant, graduate University of Louisville. Is now completing three years residency, one in Internal Medicine and two in Pediatrics. Desires clinic, assistant or associate. Available July, 1956. LW-232

◆

A 34 year old, married physician, Presbyterian, graduate University of Tennessee. Board eligible in Surgery. Desires general practice with surgery in clinic, assistant or associate. Available July, 1956. LW-233

◆

A 29 year old, married physician, Baptist, graduate Medical College of Virginia. Three years residency in Internal Medicine. Desires practice in any sized community in Internal Medicine. Available July, 1956. LW-234

◆

A 29 year old, married physician, graduate University of Michigan. Now completing three years residency in Opthalmology. Desires clinic, assistant or associate. Available July, 1956. LW-235

◆

A 33 year old, married physician, Methodist, graduate Duke University. Board eligible in Surgery. Desires surgical practice, clinical, assistant or associate. Available July, 1956. LW-236

◆

A 31 year old single physician, Protestant. Graduate University of Virginia. Board eligible in Surgery in September. Priority IV. Desires surgical practice in community 15,000-50,000, West Tennessee. Available Fall, 1956. LW-237

Physician Wanted

Excellent opportunity: Physician to take over general practice with surgery if desired, in town of 4,500 population, located northwest Tennessee. Physician left for residency. PW-61

◆

Wanted: An associate, in general practice in clinic with two other physicians. Middle Tennessee. Will guarantee a generous income from the start. Do not need to buy any equipment. PW-65

◆

Small town in West Tennessee desires general practitioner. No other physician in community. All efforts will be made to cooperate with physician in setting up his practice. PW-67

◆

Doctor wanted for general practice in East Tennessee city with exceptionally large trade area. Town is 35,000 population. Good hospital facilities. Beginning salary will be associate with one other physician. PW-70

◆

West Tennessee community desires general practitioner. Population of town 1,000—of trade area, 2,500. No other physician in town. Home and office available. PW-74

◆

Wanted: Physician to replace leaving member of clinic in West Tennessee. Population of town 4,500, of trade area 16,000. Office and equipment available. PW-79

◆

Small community in Middle Tennessee desires physician to take over practice of physician who passed away. Highly industrialized town in center of three towns which are also without a physician. PW-80

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Journal of the Tennessee State Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 49 AUGUST, 1956 Number 8

This is an up-to-date review of the newer therapeutic agents and their use in the leukemias and lymphomas.

MANAGEMENT OF THE LEUKEMIAS*

ROBERT J. BRIMI, M.D., Knoxville, Tenn.

Despite recent advances in the therapy of the leukemias, medical science is still searching for a cure. However, a review of the literature establishes beyond doubt that substantial progress is being made in this direction. By the judicious use of the therapeutic measures presently available it has been possible to prolong the course of both the acute and chronic phases of this disease a significant number of months. It is the purpose of this paper to outline today's methods of treatment which have altered the prognosis of leukemia and to mention briefly some of the basic principles that have made progress possible.

Therapeutic Approach

Therapy can be divided into three general groups: specific antileukemic measures, general supportive treatment, and psychiatric or personal measures. Specific antileukemic measures include: irradiation, by x-rays or radioactive substances; chemotherapy, generally meaning cytotoxic poisons; the antimetabolites, and the hormones. Under chemotherapy may be listed the following drugs: potassium arsenite or Fowler's solution, benzol, myleran, the nitrogen mustards, urethane and triethylene-melamine (TEM). The antimetabolities include aminopterin and amethopterin, which are folic acid antagonists, and the purine antagonist 6 mercaptopurine. ACTH and cortisone comprise the hormone group. General supportive measures include blood transfusion, antibiotics, adequate caloric, vitamin and mineral nutrition and possibly Thorazine for nausea. In special cases with a complicating hemolytic anemia, cortisone and even splenectomy may be needed. Psychiatric or personal measures are most important and it is here that the confidence of the patient and family in the family physician must be established and maintained from the start. When we, as physicians, are confronted with this terrible affliction, what should we do? First of all, no treatment should be undertaken without a full explanation to the patient and or the family as to what the therapy entails as to time, expense, prognosis, and possible consequences of treatment. Patients in general, should be told about their disease unless there are strong objections raised by the family. This will ensure the necessary cooperation for continued care. One may compare chronic leukemia to diabetes or pernicious anemia, diseases that can be largely alleviated but not cured. Secondly, once the diagnosis of leukemia is firmly established, the doctor should consider his available facilities and then decide with the family whether or not treatment at more elaborate institutions is necessary. Fortunately, with the recent development of newer drugs, referral to larger centers is rarely necessary. Especially in the case of children, it is unwise to break up the family and remove the child from his secure, familiar surroundings, and from the personal care that only his family doctor can give him.

The next question that naturally arises in an established case of leukemia is when should treatment begin? Here, as a rule, clinical indications are more important than the level of the blood count. Treatment should be started when there is increasing anemia, weight loss, pressure symptoms, tissue invasion with pain and disfigurement

*Read before the Meeting of the Tennessee State Medical Association, April 9, 1956, Memphis, Tenn.

or uncomfortable glandular enlargement.

Finally, should all cases be treated? Prevailing opinion in some quarters regarding the acute leukemias would tend to discourage much effort since the prognosis remains grave and death ensues after a few months, but I should like to say that proper therapy makes the patient more comfortable, significantly prolongs a fairly normal existence, gives the family time to adjust to the situation, and who knows but what some investigator may come up with a cure for leukemia which the patient whose life has been prolonged may then receive? Untreated patients die in distress suffering many of the painful complications of the disease and the family will appreciate anything that can be done to relieve their loved one's last days.

At this point, I should like to mention the advances in therapy over the past decade that have altered the prognosis of leukemia. I wish to discuss their mode of action in order to gain a better understanding of their application to the treatment of disease; and also, the initial work that laid the foundation for the development of these drugs.

In 1910, Warburg, a German scientist, discovered that phenylurethane stopped the mitosis of the egg cells of the sea urchin when added to the water in which they were growing. This observation was overlooked until 1933, when the English workers began to use urethane on rat carcinoma. When the drug produced leukopenia in these animals its use in the treatment of leukemia was suggested. In 1946, Haddow, Paterson, Thomas and Watkinson[1] reported encouraging results using urethane in 32 cases of leukemia. Later, these investigators first reported the use of Myleran (1-4 dimethanesulfonoxybutane) in tumor-bearing rats and this drug was applied to patients by Galton[2] in 1953. The use of antimetabolites in leukemia was first reported by Farber and associates[3] in 1948 when remissions were produced by the folic acid antagonists in this disease. Burchenal[4] defines an antimetabolite as a chemical substance similar enough to a metabolite to enter the same enzyme system as the metabolite but different enough to block the enzyme system. Examples of normal metabolites are the vitamins and amino acids which are precursors of nucleic acid. Para-aminobenzoic acid is a metabolite needed for the proper growth of streptococci. As we all know, sulfanilamide competes with para-aminobenzoic acid and thus succeeds in blocking the metabolism of the streptococcus at this point. Search is under way to find qualitative differences in which leukemic or malignant cells differ from normal cells. So far, no known differences exist that could be exploited and this fact is the basic difference between the chemotherapy of infection and that of leukemia. However, certain quantitative differences between the nutritional requirements of normal and leukemic cells can be utilized as a basis for treatment. A new biochemical classification of leukemia may well arise based on response to chemotherapeutic agents. Quantitative differences between the nutritional requirements of leukemic and normal cells have been utilized, however, by the use of aminopterin and amethopterin. These agents produce a relative deficiency of the citrovorum factor which, along with folic acid, is a vitamin necessary for the growth and maturation of normal erythroid and myeloid tissue. Leukemic cells need more citrovorum factor than do normal cells and are therefore specifically damaged by a relative deficiency of this vitamin. This readily explains the production of toxic effects by overdosage of antimetabolites, such as bone marrow aplasia, thrombocytopenia, hemorrhages, ulcerations, etc. It also explains the reversal of antimetabolite toxicity by folinic acid administration.

Pearson et al[5], and Farber and associates[3] first reported the use of ACTH in the treatment of acute leukemia in 1950. The exact mechanism of action of ACTH in this disease is not known.

X-ray therapy has been used since 1902 in chronic leukemias and the lymphomas. X-ray irradiation liberates free tissue electrons which damage more rapidly growing cells more than normal cells. P^{32} gives off its own radiation with somewhat the same effects, and was first used by Lawrence in 1940.

With continued treatment of leukemia with a single agent, a state of resistance to further therapy eventually results. Resistance is thought to represent the develop-

ment of an alternate metabolic pathway either by spontaneous mutation or by selection through survival of those cells having an established secondary pathway. Thus, if two or more agents are used in a given case, a simultaneous block at two different metabolic sites should reduce the chances that mutation or selection would by-pass both blocks. However, if two blocks are in close serial order, a single alternate pathway might by-pass both blocks. Many authors therefore favor combinations of agents at the beginning of treatment although as yet, there is no evidence that combined therapy is superior to the use of one agent initially. With these items in mind, we can now consider the treatment of each morphologic class of leukemia.

Acute Leukemias

Acute leukemias include the lymphatic, "stem cell," myelocytic, and aleukemic types. Clinically, they are all about the same. So far, the folic acid antagonists, 6-mercaptopurine, and the steroids have given the best results. The condition of the patient when first seen determines which drugs are to be used and in what order. Critically ill patients are best given the necessary supportive treatment such as transfusions and antibiotics to combat anemia and infection followed by the rapidly acting hormones, ACTH and cortisone in hopes of inducing a quick remission in order to gain time for the antimetabolite drugs to become effective. Adults are more susceptible to the toxic effects of these drugs than are children and develop resistance to further therapy more quickly. Most are dead in one to nine months with a median survival time of three months. Remissions are induced in about 30 to 40 per cent of children and 10 to 20 per cent of adults.

ACTH seems to give the most rapid results. The aqueous or the Acthar gel forms may be used. The aqueous ACTH can be given intramuscularly in divided doses four times daily or by a continuous drip intravenously eight hours out of twenty-four. A child of five usually requires an average dose of from 60 to 100 mg. I.M. and 25 mg. I.V. drip. Adults have had remissions with doses of 100 to 200 mg. I.M. or 50 mg. I.V. daily.

Cortisone dosages run from 100 to 200 mg. per day orally in children, and 100 to 400 mg. daily in adults. With both drugs the electrolyte pattern should be followed by checking the carbon dioxide combing power, the serum potassium, and the blood chlorides at intervals. Deficits can be corrected or avoided in many cases by the administration of potassium chloride in doses of 3 to 5 Gm. per day. Renal function should at least be fair. Hypertension and psychotic changes contra-indicate further treatment, but Cushing's facies and acne are not dangerous and disappear fairly rapidly on discontinuance of the drugs. Massive antibiotic therapy must be instituted at the first signs of infection. Whether or not the newer steroids such as Meticortone will reduce the incidence of toxic side effects remains to be seen. Under this therapy, remissions occur in a few days with a more gradual hematologic response in 2 to 4 weeks. Remissions last from one week to three months but resistance to further therapy develops rapidly. Before resistance develops, one of the antimetabolite drugs should be added as advocated by Burchenal[6] and Dameshek[7] among others. If the patient is a child under 10 years of age, with a white blood cell count below 50,000, amethopterin or aminopterin should be used. In adults. and in children with leukocyte counts over 50,000 initially, 6-mercaptopurine appears to be the agent of choice. Aminopterin (4-amino-pteryglutamic acid) is given in doses of 1 to 2 mg. orally per day but is generally more toxic than amethopterin (4 amino-N^{10} methyl pteryglutamic acid) which is used in doses of 2.5 to 5 mg. per day. The folic acid antagonists just mentioned are given until the white count approaches normal and then omitted until it stabilizes. Complications include thrombocytopenia, hemorrhage, ulcers of the gastrointestinal tract and the mouth, and aplasia of the marrow. Maintenance doses of 0.5 to 1.0 mg. of aminopterin and 1.25 to 5.0 mg. amethopterin will usually hold the remission; 6-mercaptopurine, which is supplied in 50 mg. tablets, is given daily by the oral route in doses of 2.5 mg. per kg. body weight per day until the white count falls. It is discontinued until the count stabilizes and then maintainance doses

of 1 to 2 mg. per kg. per day are used depending upon the response. If, after four weeks, no improvement results, dosage can be increased to as much as 5 mg. per kg. per day. A high fluid output should be maintained. Toxic symptoms of 6-mercaptopurine include nausea, anorexia, vomiting. Bone marrow aplasia is a serious complication. When the patient is in fairly good condition, it can be used to continue a remission previously induced by the folic acid antagonists. At this time, it appears best to continue treatment with the same antimetabolite that produced the remission until resistance appears at which time a shift to another class of antimetabolite seems advisable. ACTH and cortisone should be held in reserve for the exacerbations not controlled by the antimetabolites. Since 6-mercaptopurine does not block the same metabolic reaction as aminopterin or amethopterin, but hits another link in the chain of nucleic acid synthesis, significant cross resistance or cross toxicity has not as yet been reported among the three groups of agents used in acute leukemia, i.e. folic acid antagonists, the antipurine drugs or the hormones.

That sequential and combined use of the steroids, ACTH, and the antimetabolites has been responsible for the advances made in treating acute leukemia is supported by the following observations. Tivey[6] found only 11 alive of 218 children with acute leukemia one year after onset of the disease who did not receive the folic antagonists or hormone therapy. In contrast, of 193 children with acute leukemia treated by the chemotherapy service of Memorial Hospital using amethopterin and the steroid hormones, 62 survived one year or longer.[5] The use of 6-mercaptopurine will undoubtably increase the percentage of survival. Dameshek and associates[7] produced remissions in 25 of 28 children using aminopterin combined with large doses of corticotrophin. Remissions were produced that lasted from four weeks to two years. It would appear that combined therapy reduces the chances of developing resistance to therapy; that toxic effects are diminished; that the chances of producing a remission are greater; and that combined therapy accounted for the longest patient survival in critically controlled studies. Maintenance therapy after remission seems advisable as the patient is kept in a happier, more stable state than with intermittent therapy although some investigators discontinue treatment until relapse occurs and treat each relapse separately.

Chronic Granulocytic Leukemia

Chronic granulocytic leukemia is not uncommon, about one-fourth of the leukemic cases seen are of this type. Most cases occur between the ages of 20 to 70. The symptoms are well known, of insidious onset with the gradual development of systemic manifestations due to anemia, splenomegaly, or to the general leukemic process. Duration of life is usually from one to six years. Patients are often entirely symptomless and may require no immediate treatment. There is an unsettled controversy as to whether to treat patients only when symptoms develop or of treating the disease so as to maintain the peripheral blood and marrow as close to normal as possible.

X-ray therapy is still the treatment of choice and yardstick by which all other therapy is evaluated.[9] This form of treatment may be either local radiation to the spleen in doses of 50 to 100 r daily, alternating anterior and posterior ports until a total dose of 600 r has been given, or total body spray of 10 to 20 r every other day with a total course of 50 to 100 r.[10] This will usually bring the count down but higher doses may be necessary. The white count should be kept in the 20-30,000 cells per cu.mm. range. Toxic effects are nausea, vomiting, weakness, malaise, and abdominal pain. Smaller doses should be used in the presence of leukopenia accompanied by organmegaly or other manifestations if the bone marrow shows leukemic changes. X-ray is most effective for relief of local symptoms; its chief disadvantages are that it takes from four to six weeks to produce a noticeable effect, that radiation sickness develops, and that it requires close cooperation between the clinician and the radiologist. The radiologist should decide whether local or general body treatment is to be given and the dosage to be used. The clinician should acquaint the radiologist with any special problems, follow the blood

counts during therapy to avoid severe leukopenia and thrombocytopenia, and follow the patient's course after completion of treatment to determine when further therapy is needed. Generally speaking, when symptoms are present and the white blood cell count is over 50,000 cells per cu.mm., another course of therapy is advisable.

Radioactive phosphorous (P^{32}) localizes in the active bone marrow and is a convenient method for giving general body radiation where it is available. After a single dose, one to two weeks are required to evaluate the effects and the full effect of a single dose extends to six weeks. One advantage of using this agent is that treatment intervals are fairly wide apart, from one to two weeks initially and then less frequently. Radiation sickness is rare. However, it does not relieve local symptoms as well as the x-ray. Dosage must be individualized and depends on the changes produced in the peripheral blood. It can be given orally or intravenously. No food is allowed within six hours before or three hours after a dose and no iron or phosphate medication is permitted less than 24 hours before a given dose. The usual dose is 0.1 millicurie per kg. body weight.[4] With a white cell level of or above 50,000 cells per cu.mm., 2 to 3 millicuries of P^{32} may be given initially and 1 to 1.5 millicuries should be repeated at about intervals of 4 weeks or whenever the white count is above 20,000 cells cu.mm. The white cell level should not be brought below 15,000 cells cu.mm. Many cases have been maintained after initial treatment on smaller doses of from 0.1 to 1.0 millicurie every one to three months, for a number of years. Severe bone marrow depression has followed over-treatment. Repeated courses can be given when signs of relapse develop, and local X-ray irradiation may be combined or interspersed with radioactive phosphorous treatment as required by local symptomatology. Regularly spaced or titrated doses of P^{32} or x-ray spray irradiation throughout the course of the disease regardless of symptomatology is advocated by Osgood[11, 12] in order to maintain a more uniform state of well-being but similar results with intermittent symptomatic treatment with P^{32} have been reported by Lawrence and associates.[13] At present, no one method of irradiation produces superior results over any other method. Treated cases survive an average of 4 years with many patients living relatively longer than 4 years.

Of the chemotherapeutic agents useful in treatment of chronic myelogenous leukemia, myleran (1-4 dimethanesulfonoxybutane) appears to be the best. It depresses myeloid tissue, thus acting almost opposite to the effects of the nitrogen mustards. It is administered in oral doses of from 4 to 6 mg. per day and reduced to 2 mg. per day as the white cell count approaches normal; it is increased to 8 mg. per day in cases that exhibit moderate resistance. It is not as effective as irradiation. Treatment is interrupted after remission and restarted with relapse or when the white count rises over 50,000 cells per cu.mm. This drug comes in 2 mg. tablets, is cheap, easy to take, produces no gastrointestinal symptoms or significant side effects. Patients treated previously by other methods may require higher dosage. It has caused remission in cases in whom irradiation was ineffective or contraindicated. In 19 cases reported by Galton[2] remissions lasting less than 6 months were induced in 9, and from 6 to 21 months in the remaining ten. Some cases developed drug resistance.

Urethane (ethyl carbamate)[1] is generally poorly tolerated orally and less effective than irradiation or myleran. It is supplied in enteric coated 0.5 Gm. tablets and in doses of 0.5 to 1.0 Gm. t.i.d. remissions in 2 to 3 weeks are noted. Some patients require as much as 8 to 10 Gm. per day. The white cell count should be checked every three to four days initially and the drug discontinued when the count falls below 20,000 cells per cu.mm. The white count continues to fall for several days to one week after stopping the drug. The mode of action of this drug is poorly understood. A paradoxical effect in aleukemic states has been observed where it produced an elevation of the white cell count. It is most useful in multiple myeloma. Maintenance doses of 0.5 to 2 Gm. are used after the white count stabilizes.

6-mercaptopurine, according to Burchenal,[4] is the only antimetabolite that seems to have any practical effect in chronic my-

elocytic leukemia. A dose of 2.5 mg. per kg. body weight orally produced remissions in all of 10 cases of chronic myelocytic leukemia in the early stages of the disease without toxic effects. Remissions for periods up to one year are recorded so far. Maintenance treatment prevents relapses which occur in one to two months after stopping the drug. It appears that 6-mercaptopurine may be useful in providing temporary benefit in the acute terminal phase of this disease.

Chronic Lymphatic Leukemia

Chronic lymphatic leukemia may be exceedingly benign, especially in the elderly. No treatment may be required for long periods of time. About one third of the cases of leukemia are of this type. Males are affected about twice as frequently as females, and the disease appears between the ages of 30 to 80. Acute exacerbations are infrequent. Survival varies from one to eight years with a median survival of three years.

X-ray is the first choice in treatment, but at one-half the dosage employed in treating chronic granulocytic leukemia. Radioactive phosphorous is likewise employed, again, at half the dose used for chronic myelogenous disease.

Of the chemotherapeutic agents, TEM, a dye developed in Germany, has been most effective. Karnafsky et al[14] first reported its value in leukemia treatment in 1951. TEM can be given orally or intravenously. It is best given two to three hours before breakfast accompanied by 2 Gm. of sodium bicarbonate. Effects are not evident after a single dose for from 7 to 14 days. Its mode of action is similar to that of the nitrogen mustards. One can expect an initial response in about two-thirds of the cases treated. The white cell count is kept between 5,000 to 15,000 cells per cu.mm., and the drug is withheld temporarily in the presence of leukopenia and thrombocytopenia. It is available in 1 and 5 mg. tablets. Initial dosage varies with the white cell level. Doses of 5 mg. on a fasting stomach are given on two consecutive days each week until the white count falls to normal values, then maintenance dosage is adjusted to keep the count below 20,000 cells per cu.mm. The patient's clinical condition should be checked at weekly intervals. A total dose of 10 to 100 mg. may be needed to induce remission. The drug is gradually withdrawn after a number of months. It has been found to be superior to x-ray therapy in cases in which the bone marrow is tightly packed with cells and secondary anemia and thrombocytopenia are present.[9] Local irradiation may be added to control local symptoms. Larger doses of TEM have been effective in chronic granulocytic leukemia. It is used to best advantage in cases with generalized involvement.

The nitrogen mustards were first reported to be effective in treating leukemia in 1946 by Gilman and Philips.[15] They interfere with cell division by inactivating cell enzyme systems, and are quite toxic and irritating to the tissues. The drug is administered as a freshly mixed solution injected into the tubing of a freely running venoclysis in a dosage of 0.4 mg. per kg. body weight in divided dosage over a two or four-day period. Nausea and vomiting are reduced if it is given at bedtime with sedation. Lymphocytes are reduced in number within 24 hours after administration and maximum depression of lymphocytes is attained over a 7 to 10 day period. Overdosage leads to thrombocytopenia and bone marrow aplasia. Nitrogen mustards are used chiefly in cases that become resistant to irradiation and in cases with generalized involvement.

ACTH and cortisone cause temporary improvement for a few weeks to three months, and are valuable in cases with symptomatic hemolytic anemia exhibiting a positive Coomb's test.

Plasmocytic Myeloma

Plasmocytic myeloma affects males twice as often as females in the 40 to 70 age group. It is characterized by multiple plasmocytic tumors of the flat bones leading to bone pain, pathologic fractures, anemia, renal failure and weakness. Survival varies from four months to four years, with a median survival of one and one-half years. Urethane in daily doses of from 2 to 5 Gms. with a total dose of 240 to 300 Gms.[9, 16] is the agent of choice, but does not significantly prolong life. Early cases exhibit a more favorable response. Symptomatic im-

provement begins in a few weeks and may continue for many months. Nausea and vomiting require interruption of therapy, but withdrawal of the drug may lead to benefit when the agent appears to lose its effect. Leukopenia rarely develops to a serious degree. The red and white cell counts, plasma proteins, and x-ray changes as well as the clinical condition of the patient should be followed at intervals. Irradiation to localized lesions relieves pain. Stilbamidine may be used when other measures fail. The steroids give symptomatic relief in one-half and some improvement clinically in about one-sixth of the patients, but benefit is of short duration.

Hodgkins Disease

The treatment of malignant lymphoma varies with the nature and extent of the disease. Roentgen irradiation to localized glandular masses is still the best therapy. Survival time with x-ray treatment alone averages from four to six years, but by using intermittent treatment, patients have lived as long as 15 to 20 years. Dosages of 100 to 300 r's per treatment with a total of from 1000 to 3000 r over an extended period are used. Nitrogen mustard in doses of 0.2 mg. per kg. body weight is the best chemical treatment. This dose is repeated on the third day. Wintrobe's plan of treatment is as follows: chlorpromazine, 25 mg. at 4 hour intervals started 8 hours before administration of the nitrogen mustards is combined with 0.1 Gm. of Nembutal given at the time of mustard therapy (8 P.M.). If the patient is not asleep by midnight, the chlorpromazine and Nembutal are repeated, one dose each.[17] Rarely is more than 0.6 mg. per kg. body weight used in a single course. Generally, the beneficial effects from a single course of nitrogen mustard therapy lasts longer than 6 weeks. In any event, serious toxic effects on the hemapoietic system can be prevented by avoiding administration of the agent or giving x-ray therapy oftener than at intervals of six weeks.

TEM at doses of 2.5 mg. per day on alternate days for four to six doses has lead to excellent remission and has relieved troublesome itching. It is slower in action than the nitrogen mustards and is used only in those who cannot tolerate the mustard drugs. TEM is valuable according to Wintrobe,[17] since it can be given orally. Because of cumulative effect, a selected dose of TEM is best given over a period of one to three days, with intervals of a month or longer between courses rather than more frequently as some have recommended. This should avoid serious toxic effects. Oral dosage is from 0.05 to 0.04 mg. per kg. body weight or about 5 to 25 mg. in a single course. Not more than 5 mg. should be given on any one day and better absorption is obtained if 2 Gm. of sodium bicarbonate are taken with each dose. TEM can be given intravenously at a dosage range of from 0.05 to 0.15 mg. per kg. body weight per course.

Lymphosarcoma

In cases of lymphosarcoma, x-ray irradiation to the local tumors is best. The nitrogen mustards are employed in patients with multiple tumors or extensive involvement.

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Summary of Chemotherapy of Leukemia and Related Disorders*

Disease	X-ray P_{32}	Mustard HN_2	Congeners TEM	Myleran	Urethane	Folic Acid Antagonists	Cortisone ACTH	6MP
Hodgkin's	††††	††††	†††	O	O	C	§	C
Chronic lymphocytic leukemia	†††	††	†††	O	O	C	§	C
Lymphosarcoma	†††	††	††	O	O	C	§	C
Reticulum cell sarcoma	††	††	†	O	O	C	O	C
Chronic myelocytic leukemia	†††	†	†	††††	††	C	O	†
Acute leukemia lymphoblastic	C	C	C	O	O	††††	††††	††
Myeloblastie	C	C	C	O	O	†††	C	††
Monocytie	C	C	C	O	O	†	C	†

*Taken from Chemotherapy of Leukemia, Hodgkin's Disease and Related Disorders, by M. M. Wintrobe et al.: Ann. Int. Med. 41:462, 1954.
††††Effective and preferable.
†††Effective.
††Moderately effective.
†Slightly effective.
§Sometimes effective.
O-Ineffective
C-Contraindicated.

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Discussion

EDMUND N. GOULDIN, M.D., (Memphis, Tenn.): Dr. Brimi has certainly done a niee job in covering such a broad subjeet in the short alloted period of time. He has left no leaf unturned in the management of leukemia. Not only has he discussed who to treat but when to treat them, where to treat them and with what to treat them. There is little I can add to what he has already said. There are some points, however, which I would like to stress.

First, is the point of diagnosis. Fortunately, in the majority of cases of leukemia the diagnosis is obvious when the whole picture is taken into eonsideration. There is, however, the occasional ease in which the diagnosis of leukemia is doubtful. It cannot be stressed too strongly not to tag these cases leukemia until the diagnosis is definitely established. The hematologist in such cases ean frequently be of much assistance. We too often see patients who have been diagnosed leukemia but who later turn out to have some other benign condition. Infectious mononucleosis remains high on this list. We recently saw in our Department a patient who was given the diagnosis of aeute leukemia elsewhere on the basis of a pancytopenia and the predominance of immature cells in the bone marrow. The patient had an aeute hypoplastic marrow syndrome with maturation arrest in the myelocytie elements. Fortunately antileukemic drugs were not given and the patient recovered completely in a matter of several weeks. The error in diagnosis here might well have proved fatal had one of the potent antileukemie drugs been given. While bone marrow examination may not be necessary in the more obvious cases it should be done on all equivocal cases, partieularly when there is a leukopenia. Interpretation of the bone marrow in such cases should be made by some one qualified in this work.

The second point I would like to stress is that while the antileukemic ehemotherapeutic agents are potent and potentially dangerous, they nevertheless ean be safely administered by competent

physicians be they internist, pediatrician, general practitioner or hematologist provided certain precautions are taken, namely; the drug is properly taken by the patient, the recommended therapeutic dose is not exceeded, the patient's blood picture is watched carefully, and the peculiarities and complications of the drug in use are familiar to the physician. Myleran for example may take from four to six weeks to manifest a noticeable change in the leukocyte count and on occasions, the effect may last long after the drug has been discontinued with the danger of developing an agranulocytosis, aplastic anemia or thrombocytopenia.

The third point is that before deciding on the type of treatment to institute, particularly for the acute leukemia in the child, the financial status and desires of the family should be strongly considered. These cases are 100 per cent fatal and at best only some symptomatic relief and possible prolongation of life for several months can be hoped for through therapy. In the adult with acute leukemia on the other hand, while the prolongation of life is equivocal, morbidity can be shortened and many patients are able to continue their daily work under an active therapeutic program. In the latter, efforts should be directed not only in controlling the leukemic process but also in combating infection, correcting anemia and either preventing or controlling hemorrhage. The adrenal cortical steroids and ACTH have been invaluable in the latter.

The fourth point is the further use of the adrenal cortical steroids and ACTH in the management of leukemia. As Dr. Brimi stated, these drugs are used in the treatment of some acute leukemia cases and quite effectively in the control of the auto-immune hemolytic anemias which on occasions occur in the leukemias. These drugs however probably have their most gratifying use in the alleviation of systemic symptoms such as fever, malaise, anorexia and nausea and vomiting. They have also been successful in massive dosages, according to Hill (Personal communication and scientific exhibit at the 1955 Southern Medical Association's annual meeting) in producing a remission in some patients even when all other measures have failed. The cost of these drugs however may prohibit their use in many cases, particularly in the massive dosage range.

The fifth point is the use of blood transfusions. They not only help to alleviate the anemia, but they have an inhibitory effect on the production of all blood cellular elements and therefore an antileukemic action. The exact nature of this is poorly understood. The ability of blood transfusions to induce a remission in acute leukemia has been recognized for many years. Their judicious use cannot be overemphasized.

Lastly, I would like to say that with the recent advances in the therapeutic agents we have been furnished with more tools with which to work in the treatment of leukemia. These agents have had their most gratifying effects in the chronic leukemias. Some of the latter cases are the most grateful patients in one's practice. The fatalistic or therapeutic nihilistic attitude that has been so prevalent among physicians in the past seems hardly justified at the present time. While we may not afford a cure in the disease as yet, we are much better equipped with these scientific tools to practice the art of medicine on the leukemic patient. The lost horizon for these people is at last beginning to take on some light.

A Controlled Study of the Effect of Intermittent Heparin Therapy on the Course of Human Coronary Atherosclerosis. Goldner, Fred Jr., M. D. Circulation 13:489, 1956.

The authors gave subcutaneous injections of 200 mg. of heparin twice a week to a group of 105 patients who had had known previous infarctions. A similar group of patients in the same cardiac clinic were given injections of a placebo in an indentical manner. Over a two year time interval 21 cardiovascular deaths were tabulated in the heparin series and there were only 4 cardiovascular deaths in the control group. In addition, there were only 5 nonfatal recurrences in the treated group as compared to 18 in the placebo series.

The heparin treated group in contrast to the placebo group reported more general improvement as well as increased effort tolerance.

The authors review the serologic alterations which have been noted by others after injections of heparin which might be related to a retardation of arteriosclerosis and its complications. For example, heparin produces a lowering in the level of low density lipoproteins. The theories related to the effects of these beta lipoproteins on arteriosclerosis are presented.

It is also pointed out that although the procedure is a little expensive, the side effects are minimal. When heparin is given as described, therapeutic anticoagulant levels are not maintained and clotting time studies are unnecessary. This method of approach to the prevention of arteriosclerosis and its complications warrants further study. (Abstracted for the Middle Tennessee Heart Association, by Fred Goldner, Jr., M.D., Nashville.)

The doctor should ask himself how many times he misses this diagnosis in each year.

GOUT—A NEGLECTED ENTITY*

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Introduction

Gout is commonly overlooked. More frequent recognition will follow alertness to its clinical manifestations. Herrick and Tyson[1] in 1936 described gout as a forgotten disease. Hench[2] in a report from the Mayo Clinic found that only 12 per cent of the cases had been recognized as gout prior to admission, although in the majority characteristic symptoms had existed for years. In June, 1946, McCracken, Owen and Pratt[3] published a paper entitled "Gout: Still a Forgotten Disease." They described patients with gout in whom many doctors in succession failed to make the correct diagnosis and families in whom unrecognized gout had existed for three generations. One physician, even after removing a tophus from the ear and noting its chalk-like contents, still adhered to the diagnosis of rheumatism. It is indeed a common experience that an inexcusable delay often occurs in the diagnosis of gout.

To historians of medicine gout has an unusual appeal. It is one of the oldest of diseases. Hippocrates, in the fifth century B.C., described it as podagra or gonagra depending on whether the big toe or knee joint was involved. Tophi were mentioned by Galen before 200 A.D.[4] The term gout was derived from the Latin, "gutta," a drop, and it was first used in the thirteenth century to signify that the poison had entered the affected joint drop by drop. Colchium[5] was known to the Byzantine physicians as early as the fifth century A.D. under the name "hermodactyl." A drug identical with colchium was described in the Ebers Papyrus in 1500 B.C. It is thought that Benjamin Franklin introduced colchium into the United States[6] Sydenham[7] was the first to differentiate gout from other types of arthritis and his description of attacks of gouty arthritis based on his personal affliction is classical. Garrod in 1848 showed that the blood of gouty persons contains abnormal amounts of uric acid. He demonstrated urate in the blood by an ingenious "thread experiment," placing a thread in the blood of a gouty patient, allowing the sodium urate to crystallize and adhere to the thread.

Case Reports

In order to illustrate certain diagnostic points the following thumbnail sketches are included. It may be of interest that, with one exception, each patient was seen in office practice or on hospital staff rounds during a four week period in January of this year. This is mentioned merely to reflect upon the incidence of gouty arthritis and to emphasize that gout is not a rare disease, just rarely diagnosed.

Case 1. N. A., a 55 year old real estate salesman, was hospitalized with a posterior myocardial infarction. During the third week of anticoagulant therapy his right big toe became red and exquisitely painful. The blood uric acid was 7 mg. %. With colchicine, the pain and erythema subsided in 12 hours.

Case 2. A. J., a 38 year old telephone repairman, had had migrating arthritis for 4 years with involvement of the toes, feet, ankles, and knees. He was asymptomatic between attacks. He had tendinitis of the left Achilles tendon and acute arthritis of the right second and third toes when initially examined. The serum uric acid was 10.6 mg. per 100cc. The acute attack responded to colchicine. He has now been observed for 7½ years and has had many recurrent attacks. Interval treatment included Probenecid and rigid dietary restriction of purines. Nevertheless, he has developed hypertension, peripheral arteriosclerosis and nephropathy with uric acid stones. In the past 10 months there have been 3 distinct myocardial infarctions, each necessitating hospitalization.

Case 3. J. R. H., a 42 year old business executive, was under treatment for lobar pneumonia when the left big toe (metatarsophalangeal area) suddenly became red and painful. Two years previously, at age 40, he had had a severe myocardial infarction. On occasions afterwards his right big toe had been painful and swollen and he

*Read before the Meeting of the Tennessee State Medical Association, April 10, 1956, Memphis, Tenn.

had consulted several physicians. Multiple changes of shoes, splitting of the shoes, salicylates, and other measures did not afford relief. His blood uric acid was 7.7 mg. per 100cc. Colchicine resulted in a disappearance of the pain within 14 hours.

Case 4. T. F., a 46 year old detective, had known gout for 9 years with multiple joint involvement. Initially, attacks were confined to the big toe. Subsequently, the knees, elbows and hands were the most painful joints. Treatment consisted of a low purine diet and 5 tablets of colchicine daily. ACTH was used to control the acute episodes. Blood uric acid values ranged from 8 to 12 mg. per 100cc. An office examination at this time followed the development of angina pectoris.

Case 5. G. C. R., a 42 year old man, was hospitalized for treatment of congestive heart failure. In the previous 9 months he had suffered two myocardial infarctions each requiring prolonged hospitalization. Suddenly, on the third day of his hospital stay, he complained of severe pain above the left heel. The left Achilles tendon was red and extremely tender. Gout was suspected and a blood uric acid determination was 7.8 mg. per 100cc. Response to colchicine was prompt. This was his initial gouty attack.

Case 6. W. W., a 69 year old known alcoholic with Laennec's cirrhosis, was admitted inebriated, complaining of chest pain. An electrocardiogram revealed an acute myocardial infarction. Eight years previously he had also suffered a heart attack. His right big toe and ankle joint were extremely painful and erythematous. The blood uric acid was 7.8 mg. per 100cc. Colchicine controlled the acute arthritis in one day.

Case 7. E. M., a 78 year old physician, was hospitalized because of a malignant melanoma of the perineum with metastases to the inguinal lymph nodes. An exploratory laparotomy, sigmoidostomy, and radial resection of the perineal skin and anal canal was carried out. Several days after this extensive operative procedure there was very little discomfort at the operative sites. However, he complained bitterly of pain in both elbows and excruciating pain on movement. There was erythema. Codeine, Demerol and salicylates did not relieve the pain. Gout was suggested, but the blood uric acid was only 5.1 mg. %. Nevertheless, with colchicine the pain subsided entirely in 24 hours. In the ensuing months, he had several typical gouty attacks.

Case 8. V. D. R., a 38 year old physician, was admitted with an acute myocardial infarction. Two years previously he had spontaneously passed several small kidney stones. Because of the frequent association of gout in such patients, three uric acid determinations were obtained, with values of 13.6 mg., 10.4 mg., and 11.6 mg. per 100cc. Later, further questioning disclosed intermittent episodes of pain in the right knee which he had attributed to an old football injury. Although no bout of joint pain has been observed, it is likely that this represents gout.

Diagnosis

The history and initial examination usually suffice to establish the diagnosis. Only a single laboratory procedure, the determination of the blood uric acid, is of value in confirming the presence of gout. The following facts should be remembered (Table 1):

Table 1

GOUT—DIAGNOSTIC POINTS

1. Males—95%
2. Big Toe
3. Coronary Disease—Men Below 45
4. Olecranon Bursitis—Achilles Tendinitis
5. Sudden Acute Joint Pain
6. Interval Complete Recovery
7. Acute Arthritis Post-Operatively, or After Severe Illness
8. Arthritis with Nephritis or Renal Colic
9. Family History of Gout
10. Tophi

1. *Predominance in males.* More than 95 per cent of patients with gout are males. This has been known since the time of Hippocrates who wrote that females are stricken with gout only after the menopause. Sydenham[7] reiterated: "Gout attacks woman but rarely—chiefly the aged and masculine." This axiom although not absolute, is still reliable.

2. *Involvement of the big toe.* Always suspect gout. The big toe is involved in 65 per cent of patients in the initial attack and, ultimately, in 95 per cent of cases.

3. *Arthritis occurring in men below the age of 45 who have experienced myocardial infarctions or who have known coronary disease or peripheral arteriosclerosis.* Gout is a metabolic disorder which is associated with premature arteriosclerotic changes. The group with coronary disease has been our most frequent source of patients with gout.

4. *Olecranon bursitis or Achilles tendinitis.* Other types of arthritis rarely localize here.

5. *Acute joint symptoms,* abruptly developing with a few minutes or an hour, often at night.

6. *Complete recovery from an acute arthritis and absence of joint symptoms between attacks.* Aretaeus of Cappadocia mentioned

that during asymptomatic periods, a gouty subject was capable of winning in the Olympic games. With rheumatoid arthritis, there is usually residual joint pain or thickening. Recovery is rarely complete.

7. *Acute joint symptoms following an operation or a severe illness.*

8. *Arthritis associated with chronic nephritis or renal colic.* Uric acid stones are present in 10 per cent of patients with gout. Deposits of urates in the renal parenchyma occur with the same frequency. Hypertension is often present, and is an additional factor in the development of nephrosclerosis, a common finding.

9. *Family history of gout.* The disease is present in other members of the family or in antecedents in 30 to 35 per cent of cases.

10. *Tophi are pathognomonic of gout.* They occur in the helices and antehelices of the ear, the knuckles, hands, toes, feet, and patellar and olecranon bursae. Tophi rarely appear before the tenth year of the disease and are found in 20 to 40 per cent of all patients with gout of that duration. They are always overlooked unless gout is suspected.

If laboratory facilities are not available, a diagnosis of gout can easily be established with the use of colchicine. Colchicine, the alkaloid of colchicum, exerts a specific action in gouty arthritis. It will not relieve the pain of other forms of acute arthritis. The response is dramatic and diagnostic. The pain is usually completely relieved in 1 to 2 days. A century ago, Thomas Watson, commented on the action of colchicum: "A patient may be in helpless agony with a tumefied red hot joint today, and walking about quite well tomorrow."

There are no x-ray findings which are diagnostic of gout. During the early stages of the disease the joints usually appear normal. However, "punched-out" areas may be seen in bone on roentgenographic examination. These represent osseous tophi and contain uric acid crystals. Involvement of the lower extremities is commoner than the upper ones. Similar punched-out areas in bone are seen in rheumatoid arthritis, Boeck's sarcoid, hyperparathyroidism, myeloma and other conditions.

Treatment

In treating the acute attack of gout the patient should be on bed rest, with an adequate fluid intake. Colchicine tablets either gr. 1/100 or 1/120 given every 1 to 2 hours almost always relieve the joint symptoms. With this drug nausea, vomiting, and often diarrhea appear. Tincture of camphorated opium is frequently taken with the colchicine to control the diarrhea. The mechanism of action of colchicine is not known. The average attack of gout requires for relief approximately 10 tablets and may require from 8 to 16 tablets. Delay of several hours in starting treatment of an acute gouty attack may increase the severity and prolong the duration of the pain. Other drugs are of benefit in acute gouty arthritis. In some patients ACTH (corticotropin) is especially effective in aborting a severe attack. It has been our practice to employ a daily injection of 100 mg. ACTH gel for 2 or 3 days. Cortisone may be administered orally in a dosage of 50 mg. four times daily for 2 days, followed by 25 mg. four times daily for 4 days. With both of these preparations colchicine should be given simultaneously (gr. 1/100 four times daily) in order to avoid a relapse of gout, and this drug should be continued for several days after steroid hormone therapy has been stopped.

Phenylbutazone (Butazolidin) is the latest and one of the most effective preparations in treating acute gout. It usually produces dramatic relief in 24 hours. This is accompanied by a fall in the blood uric acid level. An initial dose of 300 mg. is employed, followed by 200 mg. every 3 hours for 3 doses. Maintenance colchicine therapy is then instituted. The toxicity of Butazolidin is a limiting factor in its use. However, in the short-term therapy of acute gout, this hazard is not appreciable.

Chronic tophaceous gout, with the development of joint deformities and disabilities, may be prevented or, at least, be retarded by the prolonged use of probenecid (Benemid), a uricosuric agent. This drug when given in dosage of 1 or 2 Gm. daily produces an increase in urate excretion of from 35 to 200 per cent and results in a prompt fall in the blood uric acid level. With probenecid, Yii and Gutman[8] have

reported a decrease in size and actual disappearance of tophi. If urate calculi are present the drug must be used with caution. The resulting increase in urate excretion might cause deposition of uric acid in the renal parenchyma, to increase the size of calculi present, and, possibly, cause the formation of additional stones.

Conclusion

1. Gout is not a rare disorder, but one commonly overlooked. The diagnosis should be readily obtained from the history and inspection of the patient. Several pointers are listed which are of benefit in promptly making a correct diagnosis.

2. Treatment is discussed. Colchicine remains the drug *par excellence* in the acute attack of gouty arthritis.

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Discussion

M. H. LEATHERS, JR., M.D., Loretto, Tenn.

It is indeed a pleasure to be here today and to comment on Dr. Grossman's paper. It is a well organized, interesting, and instructive presentation which will increase our aptitude in finding gout. There are two main reasons why we can benefit from increased awareness of this error of metabolism. First is the incidence. Not only does it occur frequently as has been pointed out in men under forty-five, "Who have experienced myocardial infarctions or who have known coronary disease or peripheral arteriosclerosis," but it is the most common cause of acute arthritis in men over the age of thirty-five. The second reason is the tremendous benefit to the comfort and well being of the gouty patient which current therapy can offer.

I am aware of the need to be brief. Just as some of you might like to add statistics to your evaluations and others might like to be guided by a clinical approach, I prefer to borrow from an old Chinese proverb by applying this formula: "He who thinketh by the inch and speaketh by the yard should be kicketh by the foot."

There are a few constants of value in gout. First is the constancy of symptoms. Any variation in description in the ancient and newer writings has usually depended on differences in the individual writer's descriptive language. My first impressions of gout were gained as a child in reading the Katzenjammer Kids of the comics, when the grouchy Captain's foot was wrapped and propped high in an effort to protect it from the mischievous kids.

The second constant is the response to colchicine which is so dependable that it has diagnostic as well as therapeutic benefits though no one knows how the effects are brought about. In 1894, a French writer, Lecorche, wrote, "Colchicum is *par excellence* the specific for gout." Today in 1956, Dr. Grossman states, "Colchicine remains the drug *par excellence* in the acute attack of gouty arthritis."

How very similar are these statements made sixty years apart!

A third constant of gout is the elusiveness of its early stages. Without a later complication or a coincidental illness which hospitalizes a patient and puts him under close observation, too few cases are found. During a twelve month period of time in the outpatient clinic at Fitzsimons Army Hospital (This is the largest Army Hospital) I was unable to find a single patient with gout. In 1955, only 5 new cases were diagnosed at Fitzsimons. One was a diabetic. Two had coronary infarctions. Two were found on the orthopedic service in the attempt to diagnose painful joints. Incidentally, the chief resident on surgery was one of these. All were inpatients. Perhaps the best explanation for our finding so few cases is that known gout would have disqualified any one of this younger age group from service. During 1955, 30 new cases were diagnosed at the University of Colorado which is also located in Denver and has a close exchange of information with Fitzsimons.

It is fortunate that great progress has been made in the method of management. Thomas A. Edison did research on treatment of the gouty arthritic joint by applying electricity in the form of galvanic current and concluded that this method was beneficial. With the evolution of the improved means of management of the blood and tissue urate levels the complications of gout can be delayed and prevented. What we can do does lend importance to our efforts in finding the individual cases early.

The diagnosis and management of acute cholecystitis is discussed in terms of the authors' experience.

ACUTE CHOLECYSTITIS*

JOHN G. RIDDLER, M.D. and EDWIN W. EDWARDS, M.D.,** Jackson, Tenn.

For the last twenty years there has been much discussion about the proper treatment of acute cholecystitis. Before this time it was generally agreed that strict conservatism was necessary and cholecystostomy was resorted to if the patient grew worse. In the last twenty years the discovery of antibiotics, the availability of parenteral fluids, and the tremendous advances in anesthesia have been responsible for widening the therapeutic approach to this disease. Today there are many who feel that surgery in cases of acute cholecystitis should be avoided if possible but there seems to be a larger group who advocate early definitive surgical treatment.

In this article we have studied all the cases of acute cholecystitis in which the patients were operated upon by the surgical staff of The Jackson Clinic between November 1, 1950, and November 1, 1955. During this five year period 302 patients were operated upon for cholecystitis, and 82 of these had acute cholecystitis at the time of operation.

Definition of Acute Cholecystitis

The pathologic diagnosis of acute cholecystitis does not necessarily mean that the patient has acute cholecystitis clinically. The classical microscopic signs of acute cholecystitis may be found when there is no clinical evidence to support such a diagnosis. Conversely, the patient may exhibit all signs of acute cholecystitis and the gall bladder will show only mild chronic inflammatory changes. One other fact not fully appreciated is that once pathologic evidences of acute cholecystitis have appeared these may persist for weeks, months and possibly years.[1]

In this study the patients said to have acute cholecystitis were selected according to the following criteria. In each case at least five of the following were present: leucocytosis of 10,000 with a shift to the left, fever, tenderness in the right upper abdomen, nausea and vomiting, pain in right upper abdomen, operative findings of acute cholecystitis, and microscopic evidence of acute cholecystitis.

Eighty-two patients were found to meet these requirements.

Age Incidence and Sex Distribution

The ages of these patients varied between 18 and 86 years. Sixty-nine per cent were between 41 and 71 years. (Figure 1.)

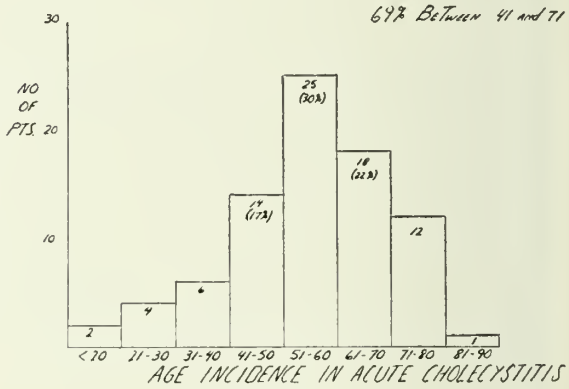


FIGURE 1.

Sex distribution revealed approximately two females to one male. (Table 1.)

Table I

	Acute	*Chronic*	*Total*
Number of Patients	82	220	302
Males	26 (31%)	28 (13%)	54
White	25	27	
Colored	1	1	
Females	56 (68%)	192 (87%)	248
White	53	186	
Colored	4	5	

Pathogenesis

Many laboratory studies on animals have shown that the early changes in acute cholecystitis are the result of a combination of obstruction to the outflow of bile and impairment of blood supply to the gall bladder wall. Obstruction is most commonly due to stone but may be caused by edema. Absorption of water from the obstructed gall bladder continues which leads to higher concentration of bile salts. Ab-

*Presented before the Consolidated Medical Assembly on March 6, 1956.

**From The Jackson Clinic, Jackson, Tennessee.

sorption of bile salts may then occur which causes chemical cholecystitis and the resulting edema decreases the blood supply to the gall bladder wall. Actual necrosis of tissue may follow leading to perforation and pericholecystic abscess or generalized peritonitis. Bacterial invasion is generally agreed to be of much less significance in early acute cholecystitis than when actual necrosis of the gall bladder wall has developed.

Diagnosis and Treatment

Usually the diagnosis of acute cholecystitis can be made without great difficulty. Pain in the right upper abdomen is usually the first symptom to appear and is usually the most prominent complaint. Tenderness to palpation under the right costal margin, fever, nausea and vomiting follow shortly. Leucocytosis with an increased percentage of neutrophiles is almost always present.

As soon as the diagnosis is reasonably established we feel that the following principles of treatment should be instituted: demerol to control pain; gastric suction for relief of vomiting; parenteral antibiotic; intravenous fluids to relieve or prevent dehydration; and barbiturates for control of restlessness. As soon as we feel confident of the diagnosis and feel that patient is able to withstand operation we advise it. We do not advise surgery when the diagnosis is in doubt, when associated disease is present that can be remedied such as cardiac decompensation, or when the patient is critically ill. In the critically ill group we believe it is wise to treat the patient conservatively until: (1) he improves enough to withstand operation or (2) until he steadily worsens. If the patient steadily grows worse in spite of conservative therapy operation may become mandatory. Cholecystostomy under local anesthesia is a worthwhile procedure. If the patient can withstand general anesthesia, cholecystectomy or even subtotal cholecystectomy as suggested by Madding[2] are preferable procedures.

Nonfatal Complications

Of the 82 patients who were operated upon for acute cholecystitis 31 (38%) had postoperative fever of 101° or above during their convalescence. The total number of febrile days for the entire group was sixty-two. Comparable figures for the 220 patients operated upon for chronic cholecystitis were 41 (20%) having fever for 66 days.

Morbidity, Complications and Mortality

The average length of postoperative stay in the hospital of the patients with acute cholecystitis was 11.5 days. (Fig. 2.) The

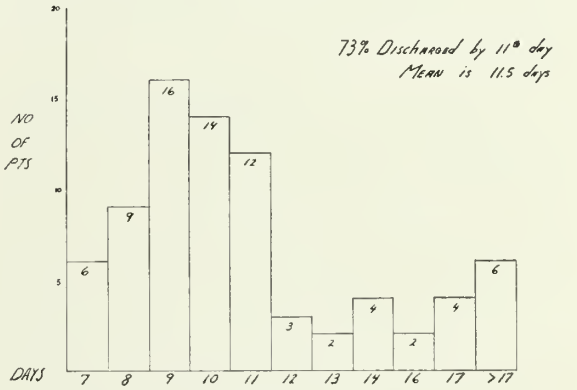


FIGURE 2.

average number of days spent in the hospital after operation for chronic cholecystitis was 10.5 days. There were seven nonfatal complications in this group of patients: wound dehiscence two; pulmonary embolism one; retained common duct stone two; cerebral thrombosis one; and atelectasis one.

One patient operated upon for acute cholecystitis died on the fifth postoperative day of pulmonary embolism.

Discussion

Seventy-four per cent of these patients were operated upon before the fourth day after admission to the hospital, and 90 per cent had been operated upon before the sixth day after admission. (Fig. 3.) This

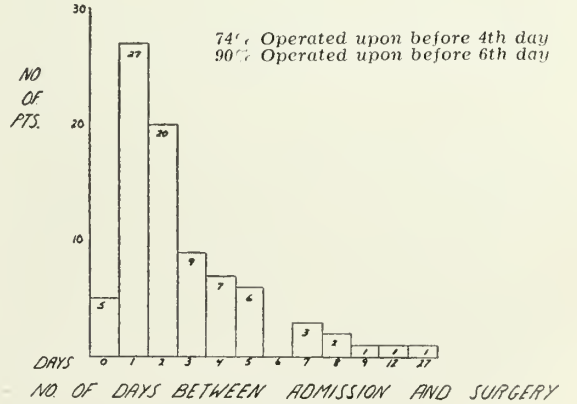


FIGURE 3.

interval between hospital admittance and operation represents the number of days required to prepare these patients for laparotomy.

In 72 patients we were able to determine the day of the disease in relation to the time of operation. We have not recognized any critical period but rather have operated on these patients when we were confident of the diagnosis and have felt that the patient was in good enough condition to withstand the operation. (Fig. 4.)

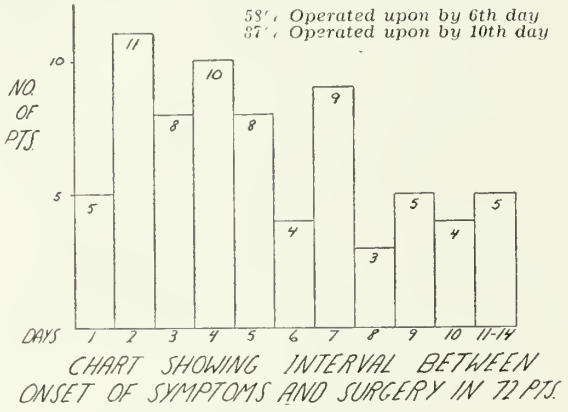


FIGURE 4.

Summary

Acute cholecystitis is a common and a serious disease. The morbidity and mortality have decreased markedly due to advances in anesthesia as well as new developments in therapy. We feel that there should be no standardized treatment for all patients that develop acute cholecystitis. Every case should be considered separately and no one rule can be safely applied to all patients.

We believe that definitive surgery should be done as soon as the patient can withstand operation. This should always be delayed until this situation obtains. This plan reduces disability and hosptalization to a minimum. The patient who is critically ill from acute cholecystitis and/or associated diseases should be operated upon only if his condition steadily worsens in spite of conservative therapy.

Cholecystectomy is the procedure of choice and can be done in most instances. Cholecystostomy is reserved for the occasional patient operated upon when critically ill or when speed is essential.

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STAFF CONFERENCE

Vanderbilt Medical School*

Alcoholism

DR. WILLIAM ORR: We are pleased that Judge Henry F. Todd, Chairman, Tennessee Alcohol Commission, and Robert F. Abbott, Counselor, Division of Vocational Rehabilitation, are with us today. The patient's history will be presented by Dr. Reed.

DR. ROBERT M. REED: This is the first Vanderbilt University Hospital admittance of this 45 year old white divorced male who is admitted on the recommendation of Judge Henry Todd of City Court, and studies under a grant from the Jack Daniel Foundation were carried out.

Chief Complaint: Alcoholism

Present Illness: The patient dates the onset of his alcoholism to about 15 years ago, although he has been drinking for at least 30 years. He states that it is difficult for him to be very exact regarding the date at which his drinking became a major problem, and that only in the past year has he been able to accept the fact of his alcoholism. Until that time he had always felt that it was a matter of his own will power that he could stop drinking if he "put his mind to it." During the past several months he has tried various "home remedies," but without success. He has always resented "help" from others, and found himself avoiding those who offered him advice on his drinking problem.

He has had no specific drinking pattern except for almost daily indulgence. In the past 10 years his longest period of abstinence was two months, and for the past year he has averaged over a pint of whiskey a day. He states that it takes almost a pint for him to feel any real effect, and that after this much he usually drinks a great deal more until he loses count of the bottles. He rarely "passes out" when drinking, but as a rule has little or no memory for events occurring during particularly heavy drinking bouts. He has had "the shakes" several times but denies having had any unrealistic visual or auditory sensations.

He has always confined his drinking to taverns, and rarely had liquor in his home. He has never engaged in solitary drinking. Often while driving to work in the morning he has seen an acquaintance standing on a street corner and has stopped "to shoot the breeze." This has usually involved "a couple of beers" and later a walk to the liquor store for a pint of whiskey. The patient feels that if he could have driven to work without seeing anyone he knew "it might be a different story now." He has been arrested numerous times over the years for public drunkenness, but states that he does not have a criminal record. He was in jail on drunkenness charges for 11 days immediately preceding admission to this hospital. He states, "My attitude changes toward people when I drink. When I'm sober, if something unpleasant comes up, I go out of my way to avoid it. When I'm drinking, I go out of my way to participate in it."

Past History: He was born in Coffee County, Tennessee, the second of three siblings. He has a brother two years older and a sister five years younger than he. His father worked for the railroad, and the family moved to Nashville when the patient was about 7 years old. He describes his father as being strict, but not severe, with the children, and indicates that he was rather distant in his relationship with the patient. Father died in 1949 of cancer. He describes his mother as being "strait-laced," and says that she always tried to "reason with us."

He started to school in Shelbyville, and after moving about was graduated from a private high school. He took a short business course in Nashville, and soon afterwards started to work in a local shoe company. He stayed with the company for 12 years and was promoted rapidly. He feels that these promotions came by "stepping on toes" of others in the company with more seniority than he, but that the boss considered ability more important than length of service. In 1941 he was fired because of his drinking, and received a copy of the letter sent by the company to the Defense Department referring to his dismissal on the grounds of "objectionable personal habits."

The patient married at the age of 21 following a two-year courtship. They have had mutually satisfactory sexual adjustment. About five years ago he noted a decrease in his wife's sexual interest, but was told by a physician that this was normal. He has not been aware of any change in his own sex drive except for an increase, as a rule, when he is sobering up from a heavy drinking bout.

The patient's first child, a boy now 16, was born 8 years after the marriage although he and his wife had always planned to have children earlier. Another son was born 4 years later. The patient has always been "mighty proud" of his children. In December, 1955, the patient's wife was granted a divorce with custody of the children. This was the crucial event in his decision to seek any help available for his problem, according to the patient.

When asked what changes he would make if he could live his life over, the patient replied that he would retain his interest in church work. "It's a good way to kill time. I mean by that it's better to have an interest in church than to be doing the sort of things I have done."

Mental Status. He is a stocky, slightly obese, graying middle-aged man who appears somewhat older than his stated 45 years. He enters the interview situation readily and appears fairly comfortable throughout. Responses to the inter-

*From the Department of Psychiatry, Vanderbilt Medical School, Nashville, Tenn.

viewer's questions and suggestions indicate a certain amount of hyperalertness suggestive of "trying to give the correct answer." There are no peculiarities of expression or general behavior. Several times he affirms his determination to cooperate in this thing a hundred per cent.

He speaks in an appropriately modulated, direct tone of voice, and shows no unusual mannerisms of verbal expression. Stream of talk is spontaneous, with little evidence of blocking; and his conversation is relevant and coherent. He has a better than average speaking vocabulary.

Although his facial expression at times suggests a feeling of depression, he is outwardly pleasant and "good humored." There are no signs of distortions of perception. He is fully oriented and shows an intact memory for recent and remote events. He does the hundred minus seven test rapidly and accurately. Proverb interpretation is done with moderate self-reference, as in his "rolling stone" response of "a man who can't stay in one place can't expect much out of life." He shows a good store of general information.

Physical Examination: Examination revealed a somewhat obese pyknic man who other than mild hypertension of 140/100 showed no gross abnormalities. There were no spider angiomata, and liver was not palpable.

Laboratory Examination. Blood Hb.: 14.7; PCV: 45; eosinophils: 306 per cu. mm.; Urine was negative. Blood sugar (fasting) was 100 mg. %. TSP were 6.5. Gms. % with an A/G ratio of 4.0/2.5, Serum bilirubin 0.3 direct, 0.2 indirect, thymol turbidity 7.0 units.

The rather extensive metabolic studies including the change in efficiency and respiratory quotient while patient walks the treadmill, with and without alcohol, have not yet been completed.

MISS LaVERGNE WILLIAMS (Social Worker): Patient's present hospitalization was precipitated by legal action taken by his wife. He had refused to accept the finality of the divorce which she obtained in mid-December, had refused to move out of the home, and interfered with the 16 year old son's use of the car. For the past 23 or 24 years patient has used alcohol excessively. Throughout this time, also, the patient never accepted the normal responsibilities of husband and father. During the past 12 years he had only intermittently obtained work. He had been verbally and physically abusive to his wife, and had shown excessive jealousy and explosive reactions when things did not go to suit him. For the past several years when intoxicated he wrote bad checks, and at present time is faced with arrest as a result of this practice. Practically all of the money he got his hands on was spent on alcohol or in gambling. Only at one other time, 10 years ago, was there any specific attempt to obtain medical care for the patient. Through the wife's efforts he was hospitalized at Davidson County Hospital for three months. While there he was temporarily interested in Alcoholics Anonymous.

He worked at the shoe factory and for the Air Force as stated in the psychiatric history. He has had long periods of unemployment during which he was intoxicated most of the time. Repeatedly his wife financed him to get started on other jobs, but these lasted for only short periods and patient never brought home any pay checks. At one point he endeavored to go into business for himself but failed because of his drinking. His wife talked at length of her many efforts to help him rehabilitate himself but all to no avail.

She told essentially the same history of their early marriage, and she thought that their sexual adjustment had been mutually satisfactory prior to patient's drinking. Subsequently when even slightly under the influence of alcohol the patient was impotent but much more frequent in his demands and persistent in his effort to complete the sex act. There were no contraceptives used, and neither of the pregnancies was planned. First pregnancy occurred 8 years after marriage and precipitated very angry accusations of infidelity against the wife. Four years later (1943) the second son was born, but he did not make the same accusations at that time. The wife worked between these pregnancies but for a period after second child's birth she quit upon her husband's insistence. However, she had to pressure him into paying the bills; and then when he quit his job, she returned to work and has been continuously employed since. There has been no social or recreational life as a family group. Wife described patient as possessive of her and the boys, refusing at times even to permit a visit to her family on special occasions. The wife did not know whether the patient had been interested in other women. However, she strongly suspects that he has because of his repeated accusations against her. The divorce action carried to completion in December, 1955, was the fourth such action she had initiated. Each time previously the patient had made promises, and she had been induced to withdraw her petitions. She did not inform him of the last filing, and he knew nothing of the decree until it was final. His relationship to his sons is not clear. He took no part in their physical care when they were young, but he now sometimes sits down to talk with them in terms of what they should or should not do.

Patient never drank in the home and never brought liquor into the house. He would come home intoxicated and noisily wake up the household, then leave only to return in an hour or so and repeat the disturbance. He was physically abusive to his wife numerous times but never to the children. She never heard of his getting into trouble with others, but he seemed to turn all of his anger against her. If an outsider came to the home while the patient was carrying on noisily, he could immediately change his behavior to present a good appearance. When drinking the patient was very aggressive and impulsive to the extent of breaking the glass in the door to gain admission to the house.

Wife described patient as being very de-

pendent on her but at the same time he dominates the family by his high temper. She speaks of his being smart and "having a good mind." In earlier life he had participated in a limited way in a few athletic interests, but more recently his only recreation has been associated with his drinking, gambling, and playing pool. Patient is thought by others to be big-hearted and generous. He can be affable and socially congenial with outsiders. The wife does not know of any special friends he may have. She has never been included in any contacts he has had. He has often said where he was going she could not go.

DR. VIRGINIA KIRK (Clinical Psychologist): Mr. T. seemed a little apprehensive about the psychologic examination and adjusted somewhat slowly to the various procedures.

Wechsler Adult Intelligence Scale: Verbal Score, I.Q.124; Performance Score, I.Q. 120; Full Score, I.Q. 123. He shows no significant loss or slowing up of intellectual functioning, but of course we have no previous tests for comparison.

Rorschach test: The patient was able to give only seven responses. He rejected Cards II, V, and VII. His few responses show that he feels extremely threatened by this test. He shows clear perception in his responses to Cards III and VIII, but the emotional quality of the stimuli brings out his associations to prison experiences and to feelings of helplessness in the presence of aggression. His rejection of the various cards seems related to his inability to perceive forms clearly when the situation is emotionally complex.

Bender Visual-Motor Gestalt test: This was done in a sort of off-hand manner without too much concern for careful accuracy. There is no evidence here of incoordination or loss of visual gestalt.

Drawings suggest some concern regarding masculine identification, anxiety related to social contacts and uncertainty regarding action or movement. The drawing of the man is somewhat like that of adolescent boys who fantasy running away. The drawings have a sketchy quality suggestive of difficulty with visual-motor integration due to mild cortical irritability or damage.

DR. WILLIAM ORR: Has anyone anything to add before we see Mr. T?

DR. ALBERT R. LAWSON: Actually I've seen Mr. T. only once in interview, but in that he pointed out that his drinking came on in disturbing degree at the time that he was most successful. He described his occupational adjustment in much more satisfactory terms than the social history indicated. He seemed to feel that he had been competent and that he had held a number of positions satisfactorily. He was particularly pleased with his war work with the military air transport service where he said that he was the head civilian traffic manager and considered this to be a job of extraordinary importance. The way he described it, it really was. It was the highest job in the Nashville area for civilians.

MISS ROXY BOGIGIAN: Being traffic manager at an air field is an important job.

MISS LaVERGNE WILLIAMS: His wife said that he did well. He quit the job because a new commanding officer, a military man, was put over him, he didn't like him, and impulsively quit—just walked out.

MISS MIRIAM McHANEY: That might not seem impulsive to him!

MISS WILLIAMS: But he had done this sort of thing repeatedly.

DR. LAWSON: His statement about his drinking was, "I begin when a problem strikes me. Then I take the day off."

DR. ORR: All right, let's see him now. (Mr. T. comes in.)

DR. ORR: Mr. T., you know most of the people here. We would like to talk with you about your problems for a while. You had a test yesterday, did you not?

MR. T.: Yes, I did.

DR. ORR: How did it make you feel?

MR. T.: It made me sleepy at first, and then from noon up until five or six o'clock I was so tense I couldn't be still.

DR. ORR: What do you mean tense?

MR. T.: Once I get started on something I would stay at that for thirty or forty minutes, I'd get a restless feeling, and I'd have to change to something else.

DR. ORR: A restless feeling?

MR. T.: It's a restless feeling, yes sir.

DR. ORR: Can you tell us more about it?

MR. T.: I'd get my mind on something. Then I'd have to move on.

DR. ORR: Did this restless feeling hit you all over, was it a shaking of your hands, a dry feeling in your mouth, or what sort of sensation was it?

MR. T.: I guess it more or less comes into the stomach first. I don't notice the nervousness so much in my hands. It's more or less in my head and in my stomach, I guess you'd say.

DR. ORR: This feeling has a lot to do with your drinking, does it not? What do you think causes the feeling?

MR. T.: Well, I've been asked that question before. I have tried to figure it out.

So far I haven't come up with a very good answer. I don't know exactly what it stems from, but it seems that a little earlier I got in the habit of fooling with people who drank, and I more or less looked these people up as I'd have spare time, or time that I could use as spare whether it was or not. And that's the process as I look back on it.

DR. ORR: You are really describing the circumstances under which it happens, not the feeling.

MR. T.: Well, I don't know where to start.

DR. ORR: Start with you.

MR. T.: Well, I guess it's lack of self-control. I don't know. I mean I thought I've had this problem so long, and it seemed to me like it just keeps getting worse every time; and each time about the time I think I have it pretty well under control, why I've made another mistake. That's all—lack of control.

DR. ORR: But you cannot identify within yourself what it is that you feel that causes you to do this.

MR. T.: No sir, I can't. I just don't know.

DR. ORR: When you go to take your first drink, what do you hope to get from it?

MR. T.: Well, I don't know. Well actually I don't know what the answer to it is.

DR. ORR: What is it at the time you take this drink that you feel?

MR. T.: Well, I don't know. I guess you more or less feel a hunger for it, I guess. I don't know what it is. After I drink a while and get where I can't stand it, I realize I've got to quit somehow, I start eating. So when I eat, I overeat and when I drink, I overdrink. Just seems like there's always a hunger there for something.

DR. ORR: Do you feel it like you feel hunger? Do you feel it in the pit of your stomach? When you want to drink, you want it in your stomach, do you?

MR. T.: It seems to me that way.

DR. ORR: You had your last test yesterday. (Intravenous alcohol.) Can you tell me more of its effect?

MR. T.: That made me feel dizzy. Well, it was similar to you might take three or four pretty good size drinks, and not have any for an hour or so. I mean you don't get the same effects from the injection that you do from taking a drink.

DR. ORR: What's the difference?

MR. T.: Well, when you take a drink, you do it right quick. And of course this stuff was going in there over a period of an hour and a half. Usually I take about a third of the amount that was given me, according to what Dr. Schmidt told me at a drink. So if I take one drink, then it's usually about fifteen or twenty minutes, I take another one, and about fifteen or twenty minutes I take another one, so that roughly I would take about the same amount in about half the length of time, and then if I didn't take another drink, say for another hour, well this feeling at the end of this would be similar to that.

DR. ORR: But at no time did you feel that you had just had three drinks?

MR. T.: I would say about two ounces.

DR. ORR: You would have felt this way with a good stiff drink?

MR. T.: Not the same.

DR. ORR: If you had the choice of feeling as you felt yesterday or the feeling that you have when you have a drink, which would you have taken?

MR. T.: Well, the one where I had the drink. Actually there wasn't the same sensation at all about this yesterday. It gives me a drowsy feeling.

DR. ORR: You felt a little drowsy? Did you want a drink after the thing was over?

MR. T.: Yes, sir. It created that desire.

DR. ORR: More than you had wanted one since you have been here?

MR. T.: That's right.

DR. ORR: How often have you wanted a drink since you've been here would you say?

MR. T.: I think this would be the first time.

DR. ORR: You really have not wanted a drink since you've been here?

MR. T.: To tell you the truth, I've been so busy I kind of just hadn't thought about it. I've been pretty well occupied.

DR. ORR: How long did the feeling that you wanted a drink after this last?

MR. T.: Up until last night.

DR. ORR: Today you do not feel that you want to drink any more than you did day before yesterday? (Patient shakes head.) But up until you went to bed last night you would have liked another drink, even after supper?

MR. T.: Well, I tell you my stomach was upset, so I didn't eat any supper. I ate some snacks at nine.

DR. ORR: After that, did you still want a drink?

MR. T.: I didn't think too much about it. I kind of had my mind occupied with other things. I didn't think about it.

DR. ORR: But up until you ate the snacks you would have liked to have had a drink?

MR. T.: Until then I had that urge I guess you might say.

DR. ORR: Now here come the real hard questions. What do you think that can be done to help you?

MR. T.: Well, sir, I tell you I've tried to solve that problem so long myself, and I haven't been able to do anything about it, so I just honestly don't know. I mean I've, I don't guess anybody knows how I've wrestled with it. I just. . . . It looks like I've come up with the wrong answers every time.

DR. ORR: Well, what do you think, what areas, what do you think should be attacked in order to help you?

MR. T.: Well, I don't know. In a way it seems to me that I've got to give myself a lot of help. That is I've got to change my habits all the way around, my friendships, my spare habits, and so on. I think the biggest thing that I have to do is change the habits that I've gotten into over a period of twenty to twenty-five years because it seems like people that I've usually been very friendly with are inclined more or less the same way that I have been; and it's not all of those people have wound up in the condition that I have, but they all like to have a drink and so on. They're all good people.

DR. ORR: What else do you think besides changing your friends?

MR. T.: Well, I think that I need to kind of get back, and do a little church going. That's one thing I have neglected to an extreme degree.

DR. ORR: What about you?

MR. T.: That's a big question.

DR. ORR: Do you think anything can be done for you?

MR. T.: Yes, sir, I certainly hope so. I wouldn't know exactly how to put it in words, I wouldn't know, but I think there's a lot that can be done to help me.

DR. ORR: What do you think you need to do for yourself?

MR. T.: Well, I need to get to work and spend my time on the job instead of fumbling around.

DR. ORR: But you have said this to yourself now for fifteen years, haven't you?

MR. T.: That's right.

DR. ORR: And this doesn't give us any greater knowledge on which to operate, does it?

MR. T.: No, sir. I believe that's about as good as I can do with it.

DR. ORR: Do you see any attitudes that you have towards yourself which are not useful to you?

MR. T.: Well, . . .

DR. ORR: As the kind of person you see yourself as.

MR. T.: Pretty rough, sometimes. I know that there are a lot of good changes I could make.

DR. ORR: Namely?

MR. T.: Well, again, I don't know any, but there are bound to be a lot of them. I'm not trying to evade the questions.

DR. ORR: I don't feel you are trying to evade my questions.

MR. T.: I just can't come up with the answers, that's all.

DR. ORR: What do you think you've gotten from your stay here?

MR. T.: Well, one thing, I sleep well now, and I've gotten sober. Another thing I've gotten to the point where I can put things out of my mind fairly good. I have tried to be able to live with myself, and that's one thing I haven't been able to do in a pretty good while. All these things that I've done haven't agreed with me or with anybody else. I've got into that rut, and it seems that I didn't have enough guts to get out of it.

DR. ORR: All right. Thank you for coming in and talking with us. (Patient leaves.)

Let's start off and talk about this *man* a little, and I think we can start hind-side-to. Let's start off and talk about the possibilities of success and therapy and what we have to rehabilitate this man. This man has little insight into the fact the problem is inside him. He was not evading my

questions. Simply the questions were meaningless to him. Anything that had to do with his attitudes toward his own personality, to *his* way of viewing life, of viewing himself in life was a foreign notion to him. He is carried along by what came along, and he had no rights within himself, no feeling of integrity which would allow him to say, "By God, I'm not going to do this." Instead he lapses into these feeble statements he didn't "have much will power" which is what I believe he feels he is supposed to say. Now, I cannot see at this moment that this man can do anything but in a childlike manner accept somebody's "word" about his problem. Possibly his taking Antabuse would reinforce this. I believe he "wants" to rehabilitate himself. If he took Antabuse, he could not drink; and if he were seen regularly and were given emotional support, he might not drink for a few weeks. The hope would be he would feel the need for "inside" psychotherapy in that time.

DR. LAWSON: What do you think was the significance of his spontaneous statement, "I'm not trying to evade your questions." I thought that indicated something. Doesn't he see something here?

DR. ORR: I think it was a very humiliating thing for him to say; he was saying I recognize deficiencies in that I have no insight into myself at all, and I don't want you to think that I'm angry with you, and don't be angry with me.

DR. LAWSON: He's apologizing for his emptiness, really.

DR. ORR: Yes. that's what he's saying. Well, the second thing we can go to is the interesting remark that he made about the alcohol though he had 75 cc., was it? That's five ounces of liquor approximately, and he got no kick out of this at all, a little sleepiness, a little drowsiness. I wonder if his failing to get a kick out of the alcohol was because he did not drink it. It had to go in his mouth and stomach to be "his." This is an indication of his "oral" character. A related fact in his history is that he is a spoiled boy who wants mama to love and spank him if he is "bad," then he can do it again. He still wants someone to take care of him and spank him. Then he won't have guilt feelings. He has no feeling of his own rights or responsibilities to deal with his needs. Dr. Lawson, I understood, at one time, you to say that you felt that this drinking was an undoing of his successes.

DR. LAWSON: Not only that, but his sleeping is like that of a compulsive character also. When his anxiety becomes the greatest, he doesn't know what to do. The hunger, drinking, satiation, sleep cycle.

DR. ORR: In answer to how he was improved that he slept now.

DR. LAWSON: That was his first statement when he started talking to me about himself.

DR. ORR: The alcohol made him feel sleepy.

DR. LAWSON: Sated, really.

JUDGE HENRY F. TODD: Sated but not satisfied; sated but not happy.

DR. ORR: Yes, his dependence on his wife and her needs for this play a part also. Miss Williams has a good history from her. She has seen Miss Williams on a couple of occasions. It is interesting that though the formality of the divorce has been gone through, he is still her husband. She called me last night to say that she did not feel that he had changed at all, nor did he.

MISS WILLIAMS: He's so right. They are just the same.

DR. ORR: That he was aware of his lack of true change, even though he is "at peace" with himself and could sleep. That is beginning insight. Mr. Abbott, do you think he should be referred to Vocational Rehabilitation now?

MR. ABBOTT: No, not now; for though he has ability, superior intelligence, and a job could be found, I doubt that he could stay with it.

DR. ORR: I wonder at what point we could say this man is ready to take on the responsibility of being a person in society, rather than a little boy who is being cared for.

MR. ABBOTT: We would like to work with him when he is ready.

DR. ORR: Not now, he only wants to be cared for—by his wife—now.

DR. LAWSON: May I quote, "My only girl friend, she's pulled me out of so many of these ruts. She's never drawn the line."

MRS. JANE TOWERY: He brought it out very clearly in Card IV in the Thematic Apperception Test when he said, "Well, this

is that man struggling to go some place. Maybe he wants to do something. Looks like he's angry. This girl friend or wife is trying to hold him back." Then he said, "This is changed. I've seen it happen before. Maybe he wants to be held back a little. Maybe if she weren't there, he wouldn't have that look on his face. Maybe he's hoping she'll hold him back."

MISS WILLIAMS: This bears on the situation with which he is faced as soon as he leaves the hospital. He is faced with arrest for several hundred dollars of bad checks. His wife asked me, "Shall I take up these bad checks again? It has happened so often."

DR. LAWSON: Don't you think that one of the things we have learned so far in dealing with these people, that the kind of accepting, considerate, supporting, superficial psychotherapy increases the oral needs, drives the person to drink really?

DR. ORR: I believe that is right. I think the therapist has to be an irritant to the alcoholic. He can't be just accepting; he has to be an irritant and a stimulant.

JUDGE TODD: Since we are in generalities, I'd like to ask what significance you attach to his statement that he did not get the "jolt" out of intravenous alcohol that he does out of a big slug suddenly thrown into his stomach. Is there any medical or physical reason?

DR. ORR: Yes, there's a perfectly good possibility that there is a physical reason: blood from the stomach, where the alcohol is absorbed, passes through the liver in high concentration, and then to the general circulation; whereas when it is given intravenously, it goes to the general circulation first, and never reaches a high concentration in the portal system. Now it is perfectly possible that the high concentration of alcohol going through the liver liberates substances which are more stimulating than the alcohol itself.

JUDGE TODD: Aside from its concentration possibilities, concentration of its effect on its liver, is there a possibility of more rapid absorption than otherwise?

DR. ORR: I don't believe so.

JUDGE TODD: Personally, I attach considerable significance to his complaint that he didn't get the jolt out of the intravenous injection, and that is typical of a very large number with whom I've talked. There are very few alcoholics that are ever willing to sip alcohol. They want to throw it in, and they say they want the jolt. They want to feel it right quick and not just gradually. They don't really intend to drift off into it, at least superficially they don't. They intend to be somebody else, but quick.

DR. ORR: Though physically alcohol is more a part of the person if given intravenously, psychologically it is more a part of them if taken by mouth.

DR. ROBERT M. REED: It is interesting that even if he didn't get a "jolt" out of the intravenous alcohol, it did stimulate the desire for a drink.

DR. ORR: He wanted a drink until nine o'clock last night. Since the alcohol was destroyed long before that time. it may be a secondary metabolite which brings this about or possibly a stimulation of some memory patterns, if we are going to put it on a purely chemical-mechanistic basis.

DR. LAWSON: It was alleviated by eating snacks.

DR. ORR: I wonder why!

Let's summarize. I think the main problem is the dependent needs of this man. The most important thing that he needs to see is that he is a great big blubbering baby wanting to be cared for. Any way we can get him to feel anxious about this and earnestly seek help (because of the mobilized anxiety) from an individual who is willing to work this with him rather than just supply his needs, he could possibly be helped. But it will prove difficult to find such a therapist.

DR. LAWSON: I believe one of the things that might precipitate the anxiousness would be for his wife to change in her role, as his family is very important to him.

DR. ORR: We shall certainly not recommend to his wife that she pay his bad checks (but she probably will anyway). It may be rough on him, but he who dances too many times occasionally must pay the piper.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

Carcinoma of the Gall Bladder with Metastases to the Brain

DR. WILLIAM F. MEACHAM: This was the first Vanderbilt University Hospital admission of this 66 year old white female who was admitted with the *chief complaint* of "pressure behind her eyes."

History

The patient considered herself in good health until 4 weeks before admission when she had in a few days a rather acute onset of loss of vision in the right eye. During the time that she was losing her vision she states that she had flashes and blue designs in the right eye. She also had frontal headaches during that period and was treated for glaucoma with drops in her eyes. Five days before admission she had a similar sequence of events involving the left eye. Her vision suddenly began to fail and in 3 days she was totally blind. Vision in her left eye was accompanied by scintillating designs that were blue in color. For the month before admission the patient had morning nausea and vomiting along with headaches. Throughout this 4 weeks she also noticed an inability to empty the bladder. For the few days before admission she had dizziness when she attempted to stand and her legs seemed to give way though she felt that her legs were not weak. Since the onset of the present illness she noted tinnitus in her right ear which she described as being similar to the "puffing of a freight train." The past history was essentially negative except in November of 1954 when she had a severe cold which lasted approximately 3 weeks and required sinus irrigations in that period. She had occasional palpitation with shortness of breath.

Physical examination upon admission revealed an alert and cooperative patient who was slightly euphoric. Blood pressure was 150/70, temperature 98.6 , pulse 80. Skin and lymph nodes were normal. There was glossitis with papillary atrophy of the tongue. The neck was supple with no stiffness. There was no abnormality visible of the head. The lungs were clear to percussion and auscultation. Heart showed no enlargement, rate and rhythm were regular, no murmurs were heard. Abdomen was protuberant with an umbilical hernia; no masses nor organs were felt. Pelvic and rectal examination revealed only senile vaginitis. There was a 2 cm. pedunculated, firm, bluish, discolored, nonfriable mass on the posterior lip of the cervix; the cervix bled easily. The uterus was slightly hard, moderately enlarged and not freely movable. Extremities were normal. *Neurologic Examination:* The sensorium was clear. The cranial nerves were intact except for the second cranial nerve in which, bilaterally, there was absent perception of light. The pupils did not react to light; however, they were equal and round, and approximately 4 mm. in diameter. Funduscopic examination revealed engorgement of the veins. Papilledema was not present. There was some decrease in hearing on the right. Sensory examination was normal. There was good strength and coordination in all the extremities. Deep tendon reflexes were equal and active bilaterally. No Babinski or Hoffman reflexes were elicited. No nystagmus or ataxia were demonstrable.

Course: The day after the patient was admitted she had to be catheterized approximately every 8 hours. Following this a retention catheter was placed in the bladder, because the patient was unable to void. Lumbar puncture was performed on March 10 and the protein was found to be 57 mg.%, sugar 73 mg.%, 60 RBC, 19 WBC (24% polys, and 76% lymph), and a pressure of 152 mm. The next five days the patient remained essentially the same, afebrile, alert and awake, complaining of headaches and appeared to be losing hearing bilaterally. Lumbar puncture was repeated on March 15. The pressure was 180 mm., protein 57 mg.%, sugar was 67 mg.%, 21 WBC, (5% polys., 35% lymph.). Cell block preparation was done on this spinal fluid and no cells were seen. On March 15 the patient became completely deaf but was awake and alert and cooperative. The temperature rose to 100 on this day. Medical consultation was obtained but no additional findings were elicited. On March 17 the patient developed weakness of the face on the right and two days later it was determined to be of a lower motor neuron type. Barany tests were performed on March 19 and no nystagmus or vertigo was produced. The patient remained in the hospital for the next 10 days without any appreciable change in her condition. Ten days after the first detection of a facial paralysis it was noted to be evident no more, but the patient remained completely blind and deaf. Six days after this the patient was transferred to the Medical Service. Following transfer penicillin was started; the patient remained on that service for approximately 10 days and her condition remained essentially unchanged. The temperature seldom reached 100 , the vital signs remained intact and the state of consciousness remained unchanged. She still was blind and deaf and complained of headache with some pain in her right face and neck. Lumbar puncture was repeated and the spinal fluid was found to have a pressure of 180 mm., 85 mg.% of protein, sugar 48 mg.%, and 21 white cells (5% polys., 95% lymph.). She was then transferred back to the Neurosurgical Service for ventriculography which was performed on the fortieth hospital day.

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Thirty cc. of fluid were obtained from the ventricular system and the ventriculogram revealed mild dilatation of the third and lateral ventricles with no displacement. The aqueduct and fourth ventricle were not visualized. During the next 5 days following ventriculography the patient began a downhill course, became drowsy, was unable to eat, and required tube feedings and general supportive measures. On the day before demise the patient was able to sit in a chair for approximately 1 hour. There had been no change in her vital signs. The next day the patient suddenly expired on the ward.

Laboratory examinations. Admission urinalysis revealed sp. gr. of 1.020; sugar and protein were absent, with an occasional white cell, but no red cells or casts. Several subsequent urinalyses were similar to this one. Admission hemogram revealed white cells of 13,900, hemoglobin 15 Gm. with a PCV of 41. Subsequent hemograms revealed variation of the white count from 9,000 to 19,000, the latter was noted at the time of admission to the Medical Service and 9,000 was noted at the time of transfer back to Neurosurgery. The hemoglobin remained relatively unchanged throughout the hospital stay. Gastric analysis March 11 revealed a free hydrochloric acid of 58 degrees after histamine, with a total acidity of 78 degrees.

X-ray examinations. Routine skull films on admission were within normal limits. Chest film March 14 was normal.

DR. MEACHAM: We have here a case that is certainly interesting and rather involved. From the information at hand there is nothing to suggest any well-known neurological syndrome. Here is a 66 year old woman who in the course of 2 weeks became completely blind and within another 10 days her hearing was lost. If we start with the visual symptoms we note that her visual loss was associated with flashes of light and color designs involving only the right eye. As you know, from the anatomical arrangement of the visual fibers in the optic nerve, chiasm and optic radiation, such a symptom would mean that the optic nerve was involved and not the optic radiation. In the latter instance the visual hallucinations would correspond to the homonymous visual field; furthermore, the final total loss of vision in the right eye definitely implicates the right optic nerve and not the tract.

Now, if we attempt to analyze the meaning of the visual hallucinations we are met with a paradox. Ordinarily, *formed images* occur only for irritative lesions involving the optic radiation, most commonly in the temporal lobe and occasionally from the occipital lobe. From the meagre description of these hallucinations it seems obvious that this patient did not actually describe *formed images* but was describing designs of light or scintillating scotomata which again would result from an irritative lesion in the optic nerve. The localization of this lesion in the optic nerve is further evidenced by the fact that as her vision failed it resulted in total visual loss in the one eye and not a homonymous hemianopsia.

In the course of a very few days the identical symptom complex involved the left eye and, again, total visual loss rapidly occurred. This means that we are to account for two separate lesions involving the optic nerves since it is now obvious that her visual loss could not conceivably be accounted for by a double or bilateral homonymous hemianopsia, although such a situation while rare is not unknown. It is possible, of course, for the optic nerves to be so involved by a single large expanding lesion, affecting the nerves in an unequal fashion, later to involve both nerves with complete visual loss. However, I will propose that two separate lesions are responsible here.

We must now give some consideration to the progressive and rapid loss of hearing. Starting first in the right ear with tinnitus, it soon involved both sides and resulted in complete bilateral deafness. The type of tinnitus is of no real importance. Suffice it to say that tinnitus can be of central or peripheral origin, but the caloric tests which indicated loss of labryinthine function bilaterally is virtual proof of a peripheral type of lesion involving either the nerve or end organ, and in this instance, coupled with bilateral deafness, would mean bilateral involvement of the eighth cranial nerve, rather than temporal lobe or midbrain involvement.

The multiple spinal fluid examinations offer no real clue to the nature of her trouble and add little of positive value to our consideration of the case. Similarly, the ventricular air study tells us little. It does rule out, however, an intratentorial lesion of sufficient size to produce ventricular deformity and also eliminates the likelihood of an infratentorial lesion which might produce an obstructive hydrocephalus.

STUDENT: Could she have had torula meningitis?

DR. MEACHAM: Torula may be very difficult to diagnose but the cerebrospinal fluid findings practically uniformly suggest an inflammatory process. The spinal fluid protein will be high and the sugar content usually is quite low. In fact, the spinal fluid picture is not unlike that found in tuberculous meningitis. The final diagnosis depending, of course, on the identification of the organism. In this case the multiple examinations of the spinal fluid seem to rule out any likelihood of a low grade chronic infectious process.

STUDENT: Could this patient have had a brain-stem tumor?

DR. MEACHAM: I have given this possibility some thought and have decided against it. In such a location it would be impossible for a tumor to involve only the eighth cranial nerve and spare all the remainder, and at the same time cause loss of vision by implication of each optic nerve. Furthermore, her behavior during her illness does not suggest midbrain or medullary involvement in any way.

It is my feeling that there is no way for a single intracranial lesion to produce the chain of events which constituted her last illness. This means, therefore, that on the premise that she harbored multiple lesions, they were neoplastic and rather rapid in growth. Malignant disease with multiple intracranial metastases would explain adequately her symptoms and her rapid downhill course. Since the only clue we have regarding a possible primary source is the cervix, I must say that in our experience it has been very rare to encounter intracranial metastatic lesions from cervical malignancy. I would conclude by venturing an opinion that this patient did have multiple metastatic foci intracranially from some unknown primary site.

Anatomic Diagnoses

1) Papillary adenocarcinoma of the gall bladder with metastases to the meninges, liver, left ovary, spleen, pineal body and lymph nodes
2) Chronic cholecystitis and cholelithiasis
3) Diffuse partial atelectasis
4) Fatty metamorphosis of the liver

DR. JOHN B. THOMISON: When the patient's head was opened, the brain was found to be rather tight in the cranial vault and the convolutions were flattened. The meninges were quite granular, especially around the base of the brain and over the occipital region. On the optic nerves bilaterally were small, friable, papillary tumor nodules. There was a rather large tumor nodule on the right eighth nerve, and a somewhat smaller one on the left. A tumor nodule was also present in the pineal body. We are faced with multiple tumor nodules in the central nervous system, for which a primary lesion should be found. It was found in the gall bladder, where there was a small ulcer with elevated edges, infiltrated with tumor tissue, which also invaded the underlying liver rather widely. This was the only tumor found in the liver.

The tumor of the gallbladder is of the most common type, that is, a papillary adenocarcinoma showing varying degrees of differentiation. In some places there is a pretty successful attempt at gland formation, while in other places it is quite papillary. Cysts are sometimes formed.

The activity of the tumor in the brain is quite interesting, in that there was a marked infiltration of the meninges throughout by isolated tumor cells, extending well down into the Virchow-Robin spaces. I would suspect that some of the cells, or maybe all of the cells, which were present in the spinal fluid and which were called lymphocytes, were actually tumor cells. I reviewed the cell block and it was not revealing.

Sections of the optic nerve show small papillary tumor nodules, primarily on the surface, invading in only a few places. I suspect though that these would cause enough pressure on the nerve to produce blindness. The eighth nerves, on the other hand, are almost completely replaced by tumor. No tumor was found within the brain substance.

The spleen showed a large tumor mass, resembling the primary lesion closely. The left ovary also contained a large mass of similar tissue, measuring about 10 cm. It had pushed the uterus laterally, so that the mass was located centrally in the position normally occupied by the uterus, and must have been the mass felt clinically. In addition, the para-aortic and mesenteric lymph nodes were extensively involved.

Carcinoma of the gallbladder is a fairly rare tumor, its incidence being for example about 1:10 of carcinoma of the stomach. The usual sites of metastasis are the lymph nodes, bones and lungs, and of course, by extension, to the liver. The brain is not mentioned in any text as a site of metastasis, and this must be excessively rare. The spleen, in our experience, is an unusual metastatic site for any carcinoma.

This patient had gallstones, and there is considerable difference of opinion as to the relationship of gallstones to carcinoma of the gallbladder. Some think the apparent relationship is only coincidental.

Neoplastic meningitis occurs occasionally with most malignant tumors, but most commonly with gliomas.

DR. MEACHAM: In the consideration of neoplastic involvement of the meninges it should be remembered that neoplastic meningitis can simulate an infectious process and constitute a most baffling clinical problem. In such a situation it is possible to have complete exhaustion of the cerebrospinal fluid sugar content by the neoplastic cells just as in true active infections. The only possible method of accurate diagnosis would involve identification of tumor cells in the spinal fluid.

President's Letter



Dr. Wood

To most people giving thought to the problem of helping the disabled, there must occur the two possible avenues of relief. First, that of direct aid through governmental subsidies and the other, that of restoring the individual to health and then training him for a job if necessary, that would render him at least self-supporting if not capable of returning, through the medium of taxes, some of the money advanced for his training.

There are now around 500 families in Knox County alone on relief through aid to dependent children, costing around $325,000.00 per year. There are some 30,000 people in Tennessee who are disabled, needing medical care, training, counselling and job finding in order to be self-supporting or contributing citizens. These people, many at least, could be returned to work, support their families and become productive citizens. The physicians of the state possess the skills to return these people to productive living and other paramedical services of the state are highly competent, the vocational schools being already established and the rehabilitation councellors are capable in guiding the disabled towards attainment of a proper goal. In 1945-55, 1,695 people in Tennessee were returned to employment through our Vocational Rehabilitation Service. Before rehabilitation, the average cost of maintaining each of these was around $503.00. During this year, these 1,695 people will be earning over 3 million dollars, or four times the cost of their rehabilitation. They pay $322,050.00 in taxes, or 26% of the cost of their rehabilitation during their first year of production.

Last year, Tennessee set up $330,000.00 in state funds to match $594,000.00 federal funds. Another $554,000.00 was available from federal sources but not picked up because $237,000.00 of state funds were not made available on a matching basis. Only 2,000 disabled will be restored in Tennessee this year, yet there are 30,000 who need help. How can we afford not to meet this problem which not only restores the individual to normal healthy living or to a lucrative position, but gives the person the privilege of experiencing the joys and fruits of producing and the opportunities of showing his world that he too can take his place as a fellow American. When the next biennium approaches, inform your representatives of what is being done and what can be done for the handicapped person in your community. Let us place our rehabilitation services in a position where they can become more effective in restoring more people to health and happiness and at the same time, save the citizens of the state many thousands of dollars.

R P Blood M.D.

From the Executive Secretary

ORGANIZATIONAL NEWS

Here Is the First County Society Officers Conference Program

COUNTY MEDICAL SOCIETY OFFICERS CONFERENCE, ANDREW JACKSON HOTEL—SUNDAY, SEPTEMBER 23RD.

● All county medical society officers, the officers of the Tennessee State Medical Association, together with key representatives of the Womans Auxiliary are invited to attend the first annual County Medical Society Officers Conference in Nashville on September 23rd. Following is the program:

Outstanding Speakers Obtained

● 1. "THE EVOLUTION OF THE PRINCIPLES OF MEDICAL ETHICS"—By DR. LOUIS A. BUIE, ROCHESTER, MINNESOTA
Dr. Buie is an eminent physician in the Mayo Clinic at Rochester. He is the past chairman of the Judicial Council of the AMA and is presently the Chairman of the Committee on Constitution and By-Laws. In view of the completely revised Code of Ethics as presented to the House of Delegates of the AMA in June, it is significant that Dr. Buie discuss the important matter of ethics. He is excellently qualified on this subject. He is a very interesting and entertaining speaker.

2. "THE BASIC EIGHT—A CHECK LIST FOR COUNTY SOCIETY PUBLIC SERVICE PROGRAMS"—By MR. STEVE DONOHUE, PUBLIC RELATIONS DEPARTMENT, AMA, CHICAGO
3. "THE DOCTOR AND THE LAW"—By MR. C. JOSEPH STETLER, DIRECTOR, LAW DEPARTMENT, AMA, CHICAGO
4. "GOOD RELATIONS BETWEEN NEWSMEN AND PHYSICIANS"—By MR. BEN GOLDEN, PUBLISHER OF THE CHATTANOOGA TIMES, CHATTANOOGA

Round Table Discussion

● At the conclusion of the talks by the morning speakers, a Round Table Discussion will be conducted with Dr. Buie, Mr. Donohue, Mr. Stetler and Mr. Golden participating. Dr. James C. Gardner of Nashville, Chairman of the Board of Trustees of the Tennessee State Medical Association, will act as Moderator. This will be an opportunity to ask questions and obtain information on individual problems confronted by each county medical society.

A Dutch Buffet Luncheon will be held in the Andrew Jackson Hotel from 12:00 to 1:00 P.M. (Central Daylight Time) and the meeting will reconvene at 1:00 P.M.

Afternoon Program

● The afternoon program will consist of:

1. "EDUCATING YOUR SOCIETY TO GOOD PUBLIC SERVICE PRACTICES"—By DR. JOHN H. BURKHART, KNOXVILLE, CHAIRMAN OF THE KNOXVILLE ACADEMY OF MEDICINE'S PUBLIC SERVICE COMMITTEE
2. "THE COUNTY MEDICAL SOCIETY—KEY TO ORGANIZED MEDICINE"—By MR. J. E. BALLENTINE, EXECUTIVE SECRETARY, TENNESSEE STATE MEDICAL ASSOCIATION
3. "THE TENNESSEE TEN—YOUR PUBLIC SERVICE PROGRAM"—By MR. J. H. FORD, JR., PUBLIC SERVICE DIRECTOR, TENNESSEE STATE MEDICAL ASSOCIATION
4. "WHAT'S IN THE AMA FOR YOU"—By MR. THOMAS A. HEN-

DRICKS, SECRETARY, COUNCIL ON MEDICAL SERVICE, AMERICAN MEDICAL ASSOCIATION, CHICAGO

Question and Answer Period

● Again at the close of the afternoon presentations, a Round Table for the purpose of informal discussion, will be conducted with Dr. Burkhart, Mr. Ballentine, Mr. Ford and Mr. Hendricks being available to answer questions. Dr. J. Paul Baird, Dyersburg, President-Elect of the Tennessee State Medical Association, will act as Moderator.

Conference Conducted On Central Daylight Time

● The Conference will be open for registration at 9:00 A.M. Central Daylight Time on Sunday, September 23rd and the actual program will begin at 9:45 A.M. and will be finished by 3:00 P.M. including time for lunch.

President to Preside

● Dr. R. B. Wood, Knoxville, President of the Tennessee State Medical Association, will preside.

This conference will be of outstanding value to every county medical society officer, state association officer and committee chairmen. Any county society committee chairman or member of the Association that has an interest in such projects, is urged to attend.

Good Football Game An Added Attraction

● Since the meeting will be held on Sunday, September 23rd, it will immediately follow the Saturday night football game between Vanderbilt and the University of Georgia, and a reservation for a block of tickets has been obtained for those planning to attend. Likewise, a block of rooms have been set aside in the Andrew Jackson Hotel for the use of those attending. Those planning to attend the Conference are urged to make their reservations immediately with the Andrew Jackson Hotel or otherwise notify the Executive Secretary. Also, if you are interested in attending the football game on Saturday night between Vanderbilt and Georgia, please contact the State Headquarters Office as we will be able to obtain good tickets for you.

AMA Condenses Code Of Ethics

● The AMA has condensed its Code of Ethics to a one page document. The proposed new Code confined entirely to ethical principles, is very brief. For your information, a special item on the new Code of Ethics is contained on Page 291 in this issue of the JOURNAL. You are urged to read and carefully study the Code since its concepts are very broad and do not go into the detail as that contained in the existing Code. The House of Delegates of the AMA accepted the revised Code, but delayed putting it into effect until the Clinical Session next December. It has allowed the additional six months time for added study.

Study of 1956 State Medical Association Dues

● The Michigan State Medical Association recently surveyed each of the forty-eight constituent state medical associations on current state dues.

The study showed that the average American physician pays between $50 and $60 per year State Association dues. His county society dues range from $20 to $70 depending upon whether the county or component society maintains an executive office.

The survey reveals that the average state dues for all forty-eight states is $45.00. (Tennessee Dues $25.00.)

Public Service

THE TENNESSEE TEN

Robertson County Blood Campaign

● Robertson County is a typical Tennessee county. It has a population of some 28,000 persons. This marks the fifth year that the citizens of that county have conducted a blood collection drive under the auspices of the American Red Cross.

For the past four years blood campaigns have followed the usual pattern. Everyone talked about the need for blood. The fact that the healthy human body could spare a pint of blood as easily as a healthy tree can spare a few leaves, and many other facts and appeals, served to move a few people to meet the bloodmobile. All in all, however, the results have been disappointing.

Personal Contacts Needed

● It was decided this year that Robertson County would meet its 600-pint quota or know the reason why. In a critical self-examination Robertson Countians discovered that simply endorsing a campaign does not insure its success. They found that involving a few leading citizens, making speeches to civic clubs, and getting radio and newspaper announcements all proved helpful, but, they concluded, without personal appeals and personal contacts, most citizens would shrug the campaign off as has happened in past years.

Dr. John M. Jackson of Springfield is working on behalf of the Robertson County Medical Society to help with the organization of this year's blood drive. The target date for collection of blood is August 23. Campaign captains for every town and hamlet in the county are already fighting indifference and superstition with dramatic appeals and facts.

How They Organized

● A glimpse of this year's organization should prove helpful to anyone planning a campaign requiring strong public support. Here are some of the major phases of the effort being made in Robertson County.

Transportation. School busses, taxi cabs, and car pools will provide free transportation, on the target date, to and from the bloodmobile from any point in the county.

Employers will be contacted personally and urged to stress the importance of the drive to all employees.

Business houses will be asked to help in the general education campaign by displaying posters, passing out information sheets, and furnishing on-the-job recruiters.

Civic clubs have been asked to schedule a speaker for the campaign during the week preceding the target date. Each club is asked to determine the best way that it can help the campaign and to offer SPECIFIC help along its chosen line.

Service stations all over the county have been enlisted. Station personnel will discuss the program with patrons, pass out information sheets to each customer, and take blood pledges for the collection date.

Teachers have formed a telephone committee to make sure that each educator in the county helps spread the significance of the campaign. This group has agreed to be responsible for getting two blood donors each.

Churches have been organized using committees headed by young people in the 18 to 30 year age group.

A Telephone Brigade will operate a widely publicized telephone pledge center, contact all previous donors, and contact all recipients of blood or their families.

Dentists are actively involved and pledged to help the education campaign through personal contacts.

Druggists are similarly organized.

Area Workers, especially selected for their ability ". . . to recruit in a language that his fellows best understand . . ." have been named in every community and settlement, regardless of size.

A Hospital Emphasis Group has tailored a campaign based on personal contacts with every visitor, patient, and employee of the hospitals.

The Physicians will assist with an intensive education campaign before the target date and have agreed to be on hand at the bloodmobile to offer encouragement and compliments to donors.

The Press is following the progress of the campaign closely, placing the emphasis on action on the part of each citizen. Spot announcements, editorials, and feature stories make up a vital phase of the campaign.

Resolving a Community Problem

● Said Dr. Jackson: "All the way through this effort I hope we can experience the gratification that comes with tackling a difficult community problem with our own resources and successfully resolving it with teamwork.

"I hope we can so approach our problem and so deal with people as to prepare for and carry out a consistent 'follow-up' of our efforts to the end that, instead of a single drive resulting in the collection of a few pints of blood, we will have built the nucleus of a continuing program which will give our county a sense of respect; and as well, a most wonderful form of insurance for the well-being of our people—an ever available source of life-giving blood."

Such is public service.

Panel Discussions

● Panel discussions seem to be popular this summer for your Public Service Director. July 11 the Public Service Director was a member for a discussion of Medical Education Week at the American College Public Relations Society meeting at White Sulphur Springs, West Virginia. July 26 he participated in a panel discussion on "The Relationship Between the Private Prictice of Medicine, Public Health and the Community" at Jackson.

The occasion was the annual meeting of the West Tennessee Co-Workers Health Council which was held at the Department of Agriculture Experiment Station. Panel Moderator was Dr. R. M. Neudecker, Health Officer, Jackson-Madison County Department of Public Health. Other panel members were Dr. Frank Roberts, Assistant Dean, University of Tennessee Medical School, Memphis; Dr. John R. Thompson, TSMA Public Service Committee member, Jackson; and Mr. Claude Moore, Dyer County Superintendent of Education.

AMA PR Meeting

● August 29 the Public Service Director will speak to the AMA public relations conference at Chicago on "Improving Relations Between Medical Schools and Medical Societies."

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AUGUST, 1956

EDITORIAL

JAUNDICE DURING THORAZINE THERAPY

Chlorpromazine is an agent which has enjoyed wide popularity during the past two to three years. Although its use has been of greatest degree in the treatment of neurotic and psychotic disorders, it has also had wide application as an antiemetic, analgesic and sedative.

One prominent complication in the use of this drug is the occurrence of jaundice. The appearance of this complication has been reported in varying frequency from 1.4 to 4.8 per cent.

Recently there appeared an excellent report[1] of five patients with this type of jaundice. Repeated biopsies were obtained and the progress of the jaundice was correlated with relationship to the hepatic cellular structure. In two of the patients surgical exploration was also done.

[1]Lindsay, Stuart and Skahen, Richard: Jaundice During Chlorpromazine (Thorazine) Therapy, Arch. Path. 61:84, 1956.

Clinically, the patients have an obstructive type of jaundice. The jaundice appears only after the drug has been given for several days, usually for at least a week. Chills and fever are common. Urticaria, asthma and eosinophilia suggest a sensitivity phenomenon, but re-administration of the drug following a regression of the jaundice does not usually result in recurrence of the jaundice. There is some evidence in spite of these facts presented, that suggests that chlorpromazine is not hepatotoxic, but is simply the result of individual idiosyncrasy to the drug.

There is not much clinical evidence of hepatocellular injury. The patients do not appear to be very sick. There is not much laboratory evidence of hepatocellular injury, the plasma proteins, thymol turbidity, cephalin flocculation, bromsulphalein excretion remain normal, even though the bilirubin level and the alkalin phosphatase remain high. Hypercholesteremia is usually present initially. The jaundice will usually subside completely in a few weeks if the drug is discontinued and recovery is usually progressive, although fatalities have been reported.

Pathologically the lesion is principally centrilobular and bile stasis is confined to the central biliary canaliculi. Cellular injury is mild and reversible. This type of injury and its location separate and distinguish it from the hepatic reaction seen in other forms of toxic hepatitis, cholangioletic biliary hepatitis or cirrhosis, where the lesion extends from the portal areas into the peripheral portions of the lobules.

Since the cellular swelling is principally in the central area of the lobule, it has been suggested that this swelling compresses and occludes only the central biliary canaliculi and this results in accumulations of bile pigment in this central area of the lobule. This perhaps results in a functional biliary obstruction and gives rise to the picture of an obstructive type of jaundice. This is a lesion similar to that seen in the liver when an unfavorable reaction occurs following the use of testosterone, thiouracil and arsenic. Only minimal cellular degeneration and necrosis of individual central cells are observed unlike in other toxic injuries, the degree of cellular swelling within the

hepatic lobules does not interfere with blood flow to the central portion of the lobe with resulting extensive centrilobular necrosis.

There are no specific points in the treatment of this disorder except the discontinuance of the drug. ACTH or cortisone have been suggested as agents which thin the bile and make biliary drainage more feasible. However, there is no confirmed evidence to show that the bile in these patients is more viscid than normal. Prolonged fat restriction and severe dietary changes are not indicated.

If the possibility of this condition is borne in mind, the fact that this complication may occur does not mean chlorpromazine should not be used, since its early recognition and the discontinuance of the drug will be followed by a cure. However, in reading the many reports on this subject, the number of unnecessary exploratory operations would attest to the necessity for wider diffusion of the information relative to this complication.

A. W.

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DEPENDENTS MEDICAL CARE ACT

Public Law 569, to be known officially by the above title, was enacted with the purpose "to create and maintain high morale throughout the uniformed services by providing an improved and uniform program of medical care for members of the uniformed services and their dependents." (This includes the Army, the Navy, the Air Force, the Marine Corps, the Coast Guard, and the Commissioned Corps of the Coast and Geodetic Survey and of the Public Health Service.) The Law applies to dependents of anyone on active duty and to those who have been retired; "dependents" as spelled out in the Act are the usually accepted categories.

It is stated that dependents shall be given the medical care "in medical facilities of the uniformed services subject to the availability of space, facilities and capabilities of the medical staff." . . . (and) . . . "shall in no way interfere with the primary mission of those facilities." By an insurance plan the Defense Department is directed to provide hospitalization in private hospitals if medical facilities of the uniformed services are not available. Under either form of hospitalization the patient pays the first $25.00 of hospitalization costs. Medical care is limited to in-patient hospitalization for:— "(1) diagnosis; (2) treatment of acute medical and surgical conditions; (3) treatment of contagious diseases; (4) immunization; and (5) maternity and infant care."

Finally, "the dependents . . . may elect to receive medical care under terms of this Act in either facilities of a uniformed service" . . . (under the conditions mentioned above) . . . "or in facilities provided for under such insurance, medical service or health plan or plans as may be provided by the authority contained in this section, . . ."

It is with this latter provision, that the medical profession must deal. H.R. 9429 had the blessing of the American Medical Association, and after it became Public Law 569, task forces were set up by the Defense Department and the A.M.A. to discuss the many problems implied. As the result of the consultations by these two committees, definitions and details of dependents' care by civilian physicians were finally brought to the point at which they could be presented to the medical profession.

Accordingly, representatives of the State and Territorial Medical Associations met in Chicago on July 28 and 29 to hear, discuss and question the proposals for the implementation of this Act as it relates to the care of dependents in civilian hospitals and by civilian physicians of the patients' choice. (The insurance plan for hospitalization does not fall into this discussion.)

The consensus of the meeting was that the profession should cooperate with the Defense Department in the implementation of the Act. The representatives were asked to carry back to their respective associations two questions for their determination, and to report these to the Defense Department through the A.M.A. within some 60 days, if possible. (The Act goes into effect in December, 1956.)

One of the points is the designation of a preferred fiscal agent who will pay the doctor his fee on a local level, and will in turn be reimbursed by the Defense Department. The possible intermediary agent may be Blue Shield or a commercial carrier, or there may be direct agreement by the of-

ficers of the state association with a representative of the Defense Department (probably the Army command of a Corps Area). From the discussion it seems that in most states Blue Shield will be the fiscal agent since in those states it is "*physician controlled,*" i.e., the majority of the Board being physicians as set forth in Constitution and By-Laws. Some twelve states could already name, at Chicago, Blue Shield because of its designated function by such associations to handle these matters. In all these instances Blue Shield is so related to medical societies that it is actually a spokesman, in insurance matters, for organized medicine of that state through its control by the physicians.

The second duty imposed upon the state association is a more difficult one. It is the setting up of a "reasonable" fee schedule. This will require much thought, discussion and consultation.

The members of the House of Delegates of the Tennessee State Medical Association may anticipate a called meeting at some future date after officers and certain committees have investigated and studied these matters.

The Defense Department estimates that some 800,000 dependents will be subject to provisions of the Act. This is not a large segment of a population of 150 million, and some Tennessee physicians may never care for one of these patients. Nevertheless, the implementation of this Act with the cooperation of the medical profession is probably the most significant step which has ever been taken in medical professional and governmental relationships. The development of a successful scheme for providing medical care for a relatively small segment of the population, through a cooperative effort of organized medicine and a governmental agency, will set a pattern which may be applied to the employees of government or to the dependents of Veterans when and if Congress so decides. It is the potentialities of the future which makes careful thinking and planning at this stage mandatory.

R. H. K.

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CONFERENCE OF COUNTY MEDICAL OFFICERS

The meeting set for September 23 is a most important one, and should be the first of what must become an annual event. A meeting of this type probably should have been organized before now, for it can fill many of the gaps in the relationships between the county societies and State Association, and thus indirectly with the A.M.A. Too often the State Association in its activities and functions, is considered to be remote from those of the county societies. Too often the requests made of the officers of the county societies by the office of the State Association seem a nuisance or relatively unimportant.

This meeting will permit the county societies to discuss questions and problems concerning its relationships to the State Association, which in turn will have the opportunity to explain to the officers of the county societies its machinery of action and the aid which such officers can give in the development of smooth operations.

The officers of the State Association hope that each Society will be properly represented at the meeting so that all these objectives can be met.

R. H. K.

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Special Item

Principles of Medical Ethics Undergoing Revision

The Principles of Medical Ethics of the American Medical Association, which have served as a guide for physicians for more than a century, are undergoing radical surgery.

The A.M.A. House of Delegates, meeting in Chicago in June, approved a reference committee report on the revision. However, final action was deferred until the clinical session next November in Seattle, "to allow ample opportunity for thorough study" by A.M.A. members.

The Reference Committee of the A.M.A. reported that: "It is important to understand that medical ethics are not distinct or separate from ethics generally, but simply emphasize those general principles which are of particular concern to the medical profession. The ethical physician will observe all ethical principles because he realizes that they cannot be enforced by penal reprisals, but must be binding in conscience."

The Principles as proposed consist of a brief preamble and 10 sections which express the fundamental ethical ideas in the present Principles. Every basic principle has been preserved, but much of the wordiness and ambiguity which made ready explanation difficult have been eliminated. The change would cut the Principles from about 2500 words to a total of about 400.

The 10 proposed sections follow:

1. The prime objective of the medical profession is to render service to humanity with full respect for both the dignity of man and the rights of patients. Physicians must merit the confidence of those entrusted to their care, rendering to each a full measure of service and devotion.

2. Physicians should strive to improve medical knowledge and skill, and should make available the benefits of their professional attainments.

3. A physician should not base his practice on an exclusive dogma or a sectarian system, nor should he associate voluntarily with those who indulge in such practices.

4. The medical profession must be safeguarded against members deficient in moral character and professional c o m p e t e n c e. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

5. Except in emergencies, a physician may choose whom he will serve. Having undertaken the care of a patient, the physician may not neglect him. Unless he has been discharged, he may discontinue his services only after having given adequate notice. He should not solicit patients.

6. A physician should not dispose of his services under terms or conditions which will interfere with or impair the free and complete exercise of his independent medical judgment and skill or cause deterioration of the quality of medical care.

7. In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him to his patient.

8. A physician should seek consultation in doubtful or difficult cases, upon request or when it appears that the quality of medical service may be enhanced thereby.

9. Confidences entrusted to physicians or deficiencies observed in the disposition or character of patients, during the course of medical attendance, should not be revealed except as required by law or unless it becomes necessary in order to protect the health and welfare of the individual or the community.

10. The responsibilities of the physician extend not only to the individual but also to society and demand his cooperation and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.

DEATHS

Dr. Russell G. Tappan, 59, Knoxville, died June 15th at Presbyterian Hospital. Dr. Tappan had been in failing health for approximately one year.

Dr. J. Hugh Nunn, 51, Dyersburg, died June 27 at Baptist Hospital in Memphis.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Knoxville Academy of Medicine

At the meeting of the Society on July 10, the scientific program consisted of a discussion of "Diffuse Arteritis" by Dr. R. H. Kampmeier of Nashville, and an interesting case report by Dr. E. Converse Pierce describing the successful closure of a traumatic interventrical septal defect.

Memphis-Shelby County Medical Society

On May 22, the Society met in the Claridge Hotel for a dinner honoring Dr. Elmer Hess, the immediate past-president of the American Medical Association. Dr. Thomas Moore introduced Dr. Hess who spoke to the membership on the subject "Is the Doctor a Good Citizen?"

Roane County Medical Society

The June 26 meeting of the Society was held at the Oak Ridge Hospital. The program consisted of a paper entitled "Cysts and Tumors of the Mediastinum" by Dr. Duane Carr, of Memphis.

Anderson-Campbell County Medical Society

"Doctors Day" honoring all the physicians of the Anderson-Campbell County Medical Society was observed on June 28th. The event was sponsored by the Auxiliary to the Medical Society. The day was climaxed with a dinner for all of the doctors and their wives at the home of Dr. P. T. Howard at Fincastle.

Chattanooga-Hamilton County Medical Society

The Society held its July 5 meeting at the home of Fay B. Murphey, Jr. The program consisted of a symposium on "Peptic Ulcer Problems." Taking part were Drs. H. William Scott and Harrison J. Shull, of Nashville, and Drs. Tim Manson, J. M. Higginbotham, and Dr. Van Fletcher of Chattanooga.

Warren County Medical Society

The Society members met at Clara's restaurant, where they heard Dr. William O. Vaughn of Nashville, discuss "Atypical Pneumonias in Childhood."

MEDICAL NEWS IN TENNESSEE

Golden Anniversary Celebration Southern Medical Association

On the evening of October 2nd, in Chattanooga, there will be a celebration dinner and program at which Dr. R. L. Sanders, Past President, of Memphis, will review "Fifty Years of Medicine in the South." Dr. Dwight H. Murray, President of the American Medical Association, will bring greetings from that organization. On Wednesday morning, a plaque will be unveiled at the Read House commemorating the organization of the Southern Medical Association at that hotel fifty years before. A number of Tennessee physicians were active in the organization of the Association, and the call for the meeting came from Dr. G. C. Savage of Nashville who was President of the Tennessee State Medical Association in 1906. This was also signed by Dr. A. B. Cooke, also of Nashville. Dr. Jere Crook of Jackson was Chairman of the Committee on Constitution and By-Laws. It was the representatives from Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee who organized the Southern Medical Association at the Read House. The annual meeting of the Association will be held later in the Fall in Washington, D. C., November 12-15. Physicians of Tennessee are cordially invited to the Golden Anniversary Celebration in Chattanooga which coincides with the close of the Tennessee Valley Medical Assembly.

Vanderbilt University School of Medicine

The Poliomyelitis Respiratory Center at the University Hospital will be supported during the coming year by a grant of $54,-724.74 from the National Foundation of Infantile Paralysis effective July 1st. This is one of fifteen such regional centers in the nation. In 1955, it cared for a total of 133 inpatients. The National Foundation of Infantile Paralysis also is supporting continued research in respirator care by a grant of $8,617. This research project is under the direction of Dr. Randolph Batson, and deals with an attempt to control the respirator through impulses from the patient's muscles.

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The China Medical Board has made a $200,000 grant to the medical school for "current needs during the next two academic years."

University of Tennessee College of Medicine

A Children's Convulsive Seizure Clinic has been established in the pediatrics department of John Gaston Hospital in July. An award of $7,700 by Parke, Davis and Company, to study the effects of new drugs for epilepsy in children, has been granted.

Promotion of 19 members of the staff of the University of Tennessee Medical Unit has been announced. Advanced from associate professor of physiology to professor was Dr. Donald B. Zilversmit. The following were promoted from assistant professors to associate professors: Drs. Roger E. Koeppe, Division of Chemistry, Garabed H. Aivazian, William J. Von Lackum, and Phineas J. Sparer, all in the Department of Psychiatry, and James T. Andrews to Associate Profes-

sor and Chief of the Division of Operative Dentistry.

Promoted from instructor to assistant professor was Dr. William F. Murrah, Department of Ophthalmology. Other promotions were Drs. R. Beverly Ray and Moore Moore, Jr., from assistant to instructor in the Department of Orthopedic Surgery.

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The postgraduate programs show an increasing number of physicians, dentists, pharmacists and nurses in attendance. A total of 387 persons attended 20 courses from July, 1955, through May, 1956. The attendance of physicians to 11 three day courses, the programs being limited to 20 physicians, were attended by 216 doctors.

Tennessee Public Health Council

Governor Frank Clement has appointed two new members to the State Public Health Council and re-appointed two others. Dr. John W. Adams, Jr., Chattanooga, was appointed to succeed Dr. R. B. Wood of Knoxville. Re-appointed for three year terms are Dr. Oren A. Oliver, Nashville dentist and Dr. John R. Thompson, Jr., of Jackson.

Modern Hospital in White County

Dr. Charles Mitchell has reported that White County will have a modern well-equipped hospital upon completion. The White County Memorial Hospital costing nearly $325,000 has been approved. The new hospital will meet the standards and specifications of the State Department of Public Health. Space will be sufficient to accommodate 55 beds in private and semi-private rooms with modern type hospital equipment.

University of Tennessee Memorial Research Center and Hospital

The University of Tennessee Memorial Research Center and Hospital has received a $13,000 gift from the Knoxville Chapter of the American Cancer Society for the purchase of a deep therapy X-ray machine. The administrator for the hospital has stated that virtually all types of research instruments and equipment plus contributions to the medical library will be particularly welcome. Especially wanted are three diathermy units and a hydrotherapy bath unit. The $6,000,000 hospital was dedicated on July 18th.

Radioactive Isotopic Laboratory Opens

The only Radioactive Isotopic Laboratory of its kind in East Tennessee, Western North Carolina or Southwest Virginia, has been opened at the Memorial Hospital in Johnson City. The laboratory is operated under the supervision of the Atomic Energy Commission and a committee of doctors and nurses in the hospital.

Tennessee Heart Association

Dr. Leland Johnston, of Jackson assumed the presidency at the annual meeting in Memphis in April. The president-elect is the first layman to be elected, Mr. A. J. Moses of Chattanooga. Mr. Andrew Benedict of Nashville was elected as treasurer, Dr. Rudolph Light of Nashville as Secretary. Mr. Anthony Mathis, Jr. of Milan became state chairman of a heart fund campaign.

Cancer As It Relates to the Hospital Service for the Indigent Program

The following is of interest to all who have occasion to be responsible for medically indigent patients having cancer.

TO: County Judge or Chairman

SUBJECT: Attorney General's Opinion Relating to Certain Cancer Beneficiaries in Connection with the Hospital Service for the Indigent Law

Dear Sir:

In view of the attached opinion from the Attorney General of Tennessee concerning eligibility of certain cancer beneficiaries as they relate to the Hospital Service for the Indigent Law, the following procedure is recommended:

Suspected cancer cases should first be referred to one of the cancer diagnostic clinics approved by the Tennessee Department of Public Health for diagnosis. If it is decided at the cancer clinic that the applicant has cancer and by hospitalization can be markedly helped by definitive treatment, (See Section 17 of the Acts, legislative intent) the applicant is then referred to the local Screening Committee to determine eligibility for hospitalization under the Hospital Service for the Indigent Law.

On all requests for reimbursement for hospitalization of cancer patients there shall be included

with Form 580 a copy of the statement or the original from the cancer clinic that referred the patient to the local Screening Committee.

Respectfully yours,
R. H. Hutcheson, M.D.
Commissioner

The doctor or his secretary should keep this on file with tear sheets of pages 257 and 258, July issue of The Journal of the Tennessee State Medical Association.

Tennessee Valley Medical Assembly

The Tennessee Valley Medical Assembly, sponsored by the Chattanooga and Hamilton County Medical Society will again present an outstanding program on October 1 and 2, 1956, at the Read House in Chattanooga. Following is the scientific program:

Monday, October 1, 1956 A.M.

Registration—7:30-9:00 A.M.

Walter C. Alvarez, M.D., Chicago, Illinois
"New Observations on Little Strokes"

Philip S. Hench, M.D., Mayo Clinic, Rochester, Minn.
"The Treatment of Rheumatoid Arthritis"

J. P. Greenhill, M.D., Chicago, Illinois
"What's New in Obstetrics"

Guy W. Horsely, M.D., Richmond, Va.
"Carcinoma of the Colon and Rectum"

Dwight H. Murray, M.D., Napa, Calif.
President of the American Medical Assn.
"The Role of the A.M.A. in Improving and Increasing Scientific Programs Throughout the Country"

12:00-2:00 P.M.—Lunch

Eugene P. Pendergrass, M.D., University of Pennsylvania, Philadelphia, Pa.
"The Responsibility of the General Practitioner and the Radiologist in the Diagnosis of Curable Cancer of the Lung"

Tom D. Spies, M.D., Nutrition Clinic, Birmingham, Ala.
"The Recent Advances in the Treatment of Nutritional Disorders"

Francis Eugene Senear, M.D., Chicago, Ill.
"The Diagnosis and Treatment of the Bullous Dermatoses"

James L. Poppen, M.D., The Lahey Clinic, Boston Mass.
"Indications for Sympathectomy"
Guy W. Horsley, M.D., Moderator
Question and Answer Period

Tuesday, October 2, 1956, A.M.

Henry W. Cave, M.D., New York, N. Y.
"Ulcerative Colitis"

Russell Blattner, M.D., Baylor University College of Medicine, Houston, Texas
"Encyphalitis"

J. Hartwell Harrison, M.D., Peter Bent Brigham Hospital, Boston, Mass.
"Clinical States Due to Abnormal Adreno-Cortical Function"

Henry L. Bockus, M.D., Philadelphia, Pa.
"Chronic Regional Enteritis"

Robert E. Gross, M.D., Boston, Mass.
"Surgical Treatment for Inter-Auricular Septal Defects"

12:00-2:00 P.M.—Lunch

John S. Lundy, M.D., Mayo Clinic, Rochester, Minn.
"Pain Relief"

T. Campbell Thompson, M.D., New York, N. Y.
"Orthopedic Conditions of Special Interest to the Pediatrician and General Practitioner"

Henry L. Bockus, M.D., Philadelphia, Pa.
"The Acute Abdomen"

Michael DeBakey, M.D., Houston, Texas
"Surgical Treatment of Diseases of the Aorta"

Henry W. Cave, M.D., Moderator
Question and Answer Period

Cocktail Hour 5:30-6:30 P.M.—Courtesy Fillauer Surgical Supply Company

Banquet: 7:00 P.M.—Speaker: Dr. Fred C. Schwarz, Sydney, Australia, "Diagnosis, Prognosis and Treatment of Communism"

Honor Guest, Dr. Dwight Murray, President of the American Medical Assn., Napa, Calif.

PERSONAL NEWS

At the recent meeting of the American College of Chest Physicians in Chicago, the following physicians from Tennessee received their Certificates of Fellowship in the College: **Dr. Joseph E. Acker, Jr.,** Knoxville; **Dr. G. S. Gass** and **Dr. B. H. Webster**, Nashville; **Dr. James S. Haimsohn,** Memphis. **Dr. Hollis E. Johnson,** Nashville, served as Regent of the College for the Southern States and **Dr. David H. Waterman,** Knoxville, was re-elected Chairman of the Board of Governors of the College and serves as Governor for Tennessee.

Dr. James L. Southworth has been named acting medical director in charge of all medical activities of the new University of Tennessee Memorial Research Center Hospital. Department heads for the new hospital named were **Dr. R. B. Wood,** Chief of Internal Medicine Services; **Dr. Charles R. Zirkle,** Chief of Surgical Services; **Dr. George L. Inge**, Chief of Orthopedic Services and **Dr. A. W. Diddle,** Chief of Obstetrics and Gynecology Services. **Dr. Forrest Powell** was named the head of Anesthesiology. All of the physicians are from Knoxville.

Dr. Robert C. Hewgley, Englewood, announces the opening of his office for the practice of medicine.

Dr. Fred Owenby, Nashville, was the featured speaker at the Civil Defense College meeting on June 25th at Murfreesboro.

Dr. Arnold M. Meirowsky, Nashville, was the guest speaker at a special meeting of the Chattanooga Tri-State Chapter of National Paraplegia Foundation.

Dr. L. J. Stubblefield has opened his office for the practice of medicine in Huntland.

Dr. Paul Williams, Henderson, is leaving September 1 to take a residency in orthopedic surgery at Kennedy General Veterans Hospital in Memphis. **Dr. Howard Thomas** and **Dr. Darrell King** will take over his practice.

Dr. Charles Burns, formerly of Harriman, has taken over the medical practice of **Dr. George W. Burchfield** in Maryville.

Dr. Samuel Sullenberger, Dandridge, spoke recently before the Sertoma Club in Knoxville.

Dr. Benjamin E. Greenberg, Memphis, has been elected President of the Roentgenology Society of Memphis.

Dr. A. T. Hicks, Camden, has been appointed on the Medical Staff of Al Chymia Shrine Temple Hospital in Memphis.

Dr. H. James Crecraft has moved to Nashville to assume duties as director of the Mental Health Center.

Dr. Charles L. Roach, Sevierville, announces the opening of his office for the practice of medicine.

Dr. W. Houston Price, Chattanooga, was the weekly TV speaker on the program "Your Doctor Speaking."

Dr. Park Niceley, Knoxville, was a recent speaker at the Third Annual Mountaintop Medical Assembly.

Dr. R. G. Rhea, Paris, was the speaker for the recent meeting of the Licensed Practical Nurses Association in Paris.

Dr. David J. Prather, Union City, was recently honored for services rendered as acting superintendent of the hospital during an interim period.

Dr. R. M. Landry, Chattanooga, participated in "Your Doctor Speaking" TV program sponsored by the Health Council of Chattanooga.

Dr. Vincent M. Small has returned to his duties as director of the Health Department of Robertson County.

Dr. Hugh J. Morgan, Nashville, gave the Commencement Address at Meharry Medical College.

Dr. Fred B. Stapp, Chattanooga, was recently honored on his 95th birthday.

Dr. Phillip Livingston, Chattanooga, is the chairman of the Board of the Chattanooga Area Heart Association.

Dr. D. J. Johns, Nashville, has moved his office to 5910½ Charlotte Avenue.

Dr. R. G. Fish, Paris, attended the Board of Directors meeting of the Tennessee Division of the American Cancer Society.

Dr. James G. Hughes, Memphis, has been appointed to the National Council on Infant and Child Care.

Dr. Jack Free and **Dr. Ivan Humphries** both of Cleveland have announced the opening of their office for the practice of medicine.

Dr. Lee W. Stewart, Nashville, announces his association in the practice of anesthesiology with **Dr. Harry T. Moore, Jr., Dr. John A. Jarrell, Jr., Dr. Preston H. Bandy** and **Dr. Marion L. Smith.**

ANNOUNCEMENTS

Course in Postgraduate Gastroenterology

The American College of Gastroenterology announces its Annual Postgraduate Course in Gastroenterology to be given at the Roosevelt in New York City, on 18, 19, 20 October 1956. It is under the direction and co-chairmanship of Dr. Owen H. Wangensteen, of the University of Minnesota Medical School and Dr. I. Snapper, Director of Medical Education, Beth-El Hospital, Brooklyn, N. Y. The subject matter to be covered, from a medical as well as surgical viewpoint, will cover, essentially, the advances in diagnosis and treatment of gastrointestinal diseases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gall bladder, colon and rectum, with special studies of radiology and gastroscopy. For further information and enrollment write to the American College of Gastroenterology Department P. G., 33 West 60th Street, New York 23, N. Y.

Postgraduate Courses

The University of Tennessee College of Medicine has scheduled two postgraduate courses for the month of September. One is on OFFICE GYNECOLOGY to be held September 7-9 under the direction of Dr. Phil Schreier. The second on RADIOLOGY is scheduled for September 14-16.

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It appears that cortisone or like steroids may have a beneficial effect in caustic burns of the esophagus in terms of a lessened tendency to stricture formation.

TREATMENT OF ACUTE CAUSTIC BURNS OF THE ESOPHAGUS*

HARRY R. MORSE, M.D., Knoxville, Tenn.

Despite a great deal of publicity and public education caustic burns of the esophagus continue to be a problem facing each of us who deal with esophageal disease. Alarmed by the tremendous numbers of these tragic cases in children, Chevalier Jackson, after much effort and years of work, accomplished the passage of the "Federal Caustic Act" in 1927. This compelled the manufacturer to label conspicuously all caustics as "Poison." It has been calculated to have diminished these accidents at least 50 per cent and perhaps more. However, in the rural areas it is still common practice to make homemade soaps and washing solutions with these caustic agents. The caustics are rather frequently selected by patients attempting suicide. It is obvious that despite educational programs and legislation, we will periodically see these cases. Their management will continue to tax our ingenuity and skill.

Lye is the most common single agent which is encountered. It is 95 per cent sodium hydroxide and is present in many cleaning fluids and washing powders in varying strengths. Some of the other caustics are ammonia, iodine, lysol, phenol, mercury bichloride, sodium hypochlorate (Clorox), sodium carbonate (washing soda), potassium carbonate (salts of tartar), hydrochloric acid and sulfuric acid.

How do these accidents occur? Kernodle[1] of Duke University in 1948 reported 136 cases of lye poisoning and found that 82 per cent occurred between the ages of 1 and 5 and emphasizes the importance of this dangerous age. He stresses that the burden of prevention is with the parents. If such products must be kept in the home the only safe place is under lock and key. The top shelf is not high enough.

Pathologic Aspects

It is obvious that there are many variables involved in these cases. The severity of the burn depends on the caustic agent ingested, the concentration, the amount, and the vehicle. There may be an additional factor of double exposure when the material is vomited. Esophageal burns may be classified as are skin burns into first, second, and third degree. With a first degree burn, the mucosa is involved and perhaps the submucosa. These will frequently heal without stenosis, or at most may produce a web-like mucosal stricture. The second group have involvement of the muscularis with actual necrosis. In these cases sloughing will occur and extensive granulation tissue will develop. The third degree burns involve all the layers of the esophagus and there often is peri-esophageal involvement. The patients in this group are very toxic and very often die of shock or overwhelming infection and toxicity. Our efforts are obviously concerned mainly with the first two groups. The latter group, if they survive, will all develop severe strictures, despite treatment, in my opinion.

Jackson[2] localizes the sites of the burns according to frequency as follows: (1) crossing of the left main bronchus; (2) the cricopharyngeal region; and (3) hiatal area. Any combination is possible.

In passing, it is worth mentioning that approximately 20 per cent of caustic burns of the esophagus will be associated with

*Read before the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 9, 1956, Memphis, Tenn.

the development of pyloric stenosis.

Norris[3] feels that if the mouth and pharynx show no necrosis or exudate the presence of an esophageal burn is unlikely. Conversely, burns of the mouth and pharynx do not always indicate esophageal burns. Gregg[1] reported a patient who swallowed Drano in whom postmortem examination revealed burns of the mouth and pharynx but no burn of the esophagus, and a very extensive burn of the stomach with perforation. The only explanation offered was that milk may have been used as a vehicle. The patient vomited soon after the ingestion so the esophagus had a double exposure.

What is the pathologic sequence of events in these acute burns of the esophagus? The mucosa of the esophagus is very sensitive to caustics. With the alkalies which have a marked affinity for water the tissues appear white and almost gelatinous. There is marked edema. With an acid burn there is a coagulation necrosis, and the tissues appear more dry and charred. With the hallogens the burn generally is superficial and only rarely followed by stricture. Sloughing occurs in a few days and exuberant granulation tissue develops in second and third degree burns and is very marked in two weeks. Fibroblastic activity starts early,—within three to four days. This rapid reparative process is important in the development of eventual stricture.

Re-epithelization requires at least six weeks in the second degree burns, and complete healing may take many months. After the acute edema subsides the patient may complain of little or no dysphagia, and this so-called latent period may lull the patient and doctor into a false sense of security. However, the stricture may insidiously develop within a 2 to 3 week period or may require 1 to 2 months. Stothers[5] reported the case of a man, aged 63, with an impacted bolus of meat at the site of such a stricture, and with a history of lye ingestion at the age of ten with no symptoms until the impaction occurred. He also reported two cases with a latent period of 31 and 40 years. He states "once the esophagus has been burned, stricture may develop at any time in the life of the patient."

Treatment

Faced with an acute caustic burn of the esophagus, what is the best plan of management?

(1) The agent must be neutralized. If it be an alkali, mild acids such as vinegar, lemon juice, orange juice, or any dilute acid may be used. If the agent is an acid, mild alkalizing antidotes should be used. Milk, olive oil, glycerine or egg white may aid either type. A word of caution is in order concerning sodium bicarbonate since this will produce gaseous distention which may be detrimental. Gastric lavage is indicated except in acid burns where it is accompanied by grave danger. Induced vomiting should be avoided since it may expose the esophagus a second time.

(2) Assure an adequate airway. Tracheotomy may be life-saving in the severe cases where there is extensive laryngeal edema.

(3) Judicious sedation. These patients are in extreme pain and may be in a state of primary shock.

(4) General supportive measures as fluid balance, nutrition and prophylactic antibiotics are extremely important. It is well to remember the frequent occurrence of pulmonary complications due to "spill-over," particularly with high esophageal obstruction.

(5) Corticosteroids. In the steroids we have a very potent weapon, and the hormones have completely changed the prognosis in these cases. However, it must be realized that we are taking a calculated risk in administering the steroids. It has been shown and proved experimentally that the steroids inhibit fibroplasia. Rosenberg and associates,[6] in experimental work with rabbits, have proved this point, but with the large doses necessary there was a high mortality due to spontaneous perforation of the esophagus even with high doses of antibiotics. Weisskoff[7] has demonstrated that no strictures developed in dogs which were treated with cortisone and antibiotics alone. The controls treated actively with dilatation, but without cortisone, developed strictures. Experimental work has demonstrated in rats and mice that a delay of 48 hours in starting cortisone failed to prevent fibro-

blastic proliferation. Actual fibrosis may be present as early as at the end of a single week.

(6) Esophagoscopy. There is unanimous opinion that the cases of caustic poisoning should have an esophagoscopy to establish the diagnosis. Certainly we cannot subject a patient to a long series of dilatations unless we are sure there is an actual burn. Jackson[2] feels that this procedure should be delayed approximately two to three weeks. Others are of the opinion that esophagoscopy is best done three or four days following the burn so that active therapy may be begun earlier. In these cases, I personally believe that for the most part general anesthesia should be employed, and that it is mandatory in children. X-ray examination is notoriously weak in establishing the early diagnosis of caustic burns. However, it is advisable to obtain films as in any patient who is to have an esophagoscopic examination.

(7) Dilatations. In 1920, Salzer of Vienna first advanced the early active approach to esophageal burns. This was echoed by Bokay in 1924. Up to this time strictures were allowed to develop before any form of therapy was instituted. These men advised the passage of weighted rubber tubes starting on the second or third day and followed up with regular dilatations with gradually larger dilators. There are those who still feel that any early esophageal manipulation adds only insult to injury and this philosophy may become more widely held if the steroids prove as valuable as some investigation indicates. There are several ways of performing these dilatations. The Hurst mercury filled bougies work very well. The Jackson-Plummer dilator is very effective but necessitates the patient swallowing a string and is contraindicated in a patient who has any form of enterostomy. In severe cases the retrograde method of Tucker is very effective but of course means a gastrostomy. There are some ingenious indwelling devices which various authors have reported, but I have had no experience with these.

Surgery is advised only if conservative therapy fails and for cases with restricted severe stenosis.

Summary of Cases

Case 1. A two year old white boy swallowed an unknown quantity of lye 3 hours prior to admission. This was followed by almost constant vomiting. Examination showed the lips, buccal mucosa and pharynx to have mucosal burns. The child received vinegar and olive oil immediately following the ingestion and was started on antibiotics and cortisone upon admission. Hurst mercury dilatations were instituted on the third hospital day and continued for a period of 4 months. Esophagoscopy was done 14 days following the intake of lye and revealed a first degree burn of the midthoracic esophagus.

Case 2. A 32 year old white woman swallowed approximately one ounce of oven cleaner. She immediately vomited and continued to vomit intermittently. Examination revealed no evidence of burn in the pharynx or hypopharynx. X-ray study of the esophagus was reported as normal. The stomach showed evidence of a partial gastrectomy with a well functioning gastroenterostomy. On the fourth hospital day esophagoscopy was done under general anesthesia. From the midthoracic esophagus to within 4 cm. of the esophagogastric junction there was a first degree burn of the mucosa with areas of borderline second degree burns. Dilatations were instituted. She was placed on antibiotics and cortisone the day of admission. She was dilated for approximately four months at regular intervals.

Case 3. A 4 year old colored girl had ingested lye one hour prior to admission. She was given the white of an egg and vomited several times and continued to vomit after admission. Examination revealed the tongue and pharynx to have mucosal burns. On the fifth hospital day esophagoscopy was done under general anesthesia. A second degree burn was observed 24 cm. from the upper teeth and this extended to the esophagogastric junction, appearing to involve the entire circumference of the esophagus. Antibiotics and cortisone were started upon admission. Regular dilatations were instituted and continued for three months.

Case 4. A 16 month old white boy had ingested sodium hydroxide flakes several hours prior to admission. He was given vinegar and mineral oil by his mother. Examination revealed extensive second degree burns of the tongue, buccal mucosa and pharynx. The child was having mild stridor. He was started on antibiotics, cortisone and emollients. On the fourth hospital day esophagoscopy was done under general anesthesia and revealed a first degree burn of the cervical esophagus. Dilatations were instituted at regular intervals for five months.

Case 5. A 53 year old white man swallowed lye one week prior to admission. He was complaining of moderate dysphagia and substernal distress and was moderately dehydrated. Examination revealed mucosal burns of the buccal mucosa and lips. Esophagoscopy was done on the twelfth day following the intake of lye and revealed first

degree burns of the cervical esophagus with areas of second degree burns. The mid and lower esophagus were uninvolved. Regular dilatations were begun and have been continued regularly by the patient himself using a No. 32 Hurst dilator for the past eight months.

Summary

Caustic burns of the esophagus will continue to be a vexing problem. The development of the steroids has added a very potent weapon to our armamentarium and has been the most significant development since Salzer first advanced the early active therapy of corrosive burns. In the last two years, I have had occasion to treat and manage five cases of acute caustic burns of the esophagus. Each of these patients fortunately had mild to moderate burns. Each was treated with cortisone, antibiotics, and early dilatations. No strictures have been encountered in the period of observation which has been admittedly short, eight months to two years. It would be extremely hazardous to draw any hard and fast conclusions from such a series of cases, but certainly one has some basis for encouragement with this regimen.

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Islet Pathology in Diabetes. Hartroft, W. Stanley. Diabetes 5:98, 1956.

Extensive quantitative and qualitative investigations of the morphology of the islets of Langerhans in man and animals have established many criteria for their normality. Further advances in the morphology of the pancreatic islets will probably come from application of electron microscopic techniques. Diabetes can be produced in experimental animals by a variety of methods. All result in destruction or removal of either beta cells or their granules, with an accompanying decrease in amounts of extractable insulin. There is no method of producing in an animal experimental diabetes which is associated with a significant amount of insulin in the pancreas at autopsy, or significant numbers of granules in its beta cells. This contrasts with the universally conceded failure to demonstrate significant pathologic lesions in the islets of approximately 25 per cent of all diabetics coming to autopsy. Although pancreatic insulin and beta cell granules of adult diabetics are significantly less than in nondiabetics, there is considerable overlap between the two groups, and many diabetics, unlike the experimental animals, contain in their pancreas appreciable amounts of both extractable insulin and beta cell granules. Juvenile diabetics differ, in that almost without exception little or no insulin and beta cell granules can be found in their islets. Microscopic studies of human islet tissue irresistibly suggest that degenerative cytologic changes precede the structural alterations of hyalin or fibrous change. Recent evidence has indicated that regeneration of islet tissue does occur in an occasional diabetic pancreas. Unless election microscopy, histochemistry, or some other new approach reveals as yet unsuspected abnormalities in the islets of about 25 per cent of adult diabetics, we cannot blame the islets in these cases for the disease. In these situations extrapancreatic factors may be more important in correlating clinical and pathologic findings. The consensus of opinion concerning the importance of the diabetogenic role of the pancreas versus extrapancreatic factors has swung from one extreme to the other through the years. Like many other scientific controversies, it is most likely that the truth lies somewhere between.

(Abstracted for the Tennessee Diabetes Association by C. A. Rosenberg, M.D., Memphis.)

Attention is directed to the varied clinical picture of both acute and chronic intoxication with carbon disulfide.

CARBON DISULFIDE POISONING

BEN D. HALL, M.D., Johnson City, Tenn.

Industrial toxicology is a subject that has had little emphasis in modern medical education. A lack of familiarity with the various industrial poisons leads many of us to overlook obvious causes for perplexing diagnostic problems. We recently have had the opportunity to observe several cases of carbon disulfide poisoning in both the acute and chronic stages. The clinical manifestations have been sufficiently bizarre and variable to offer considerable diagnostic difficulty. Inasmuch as carbon disulfide is a common solvent used in many types of industrial plants, a description of two cases selected from several recently observed and a review of the common clinical manifestations may be of interest to the diagnostitian and the general practitioner who may encounter such cases.

Report of Cases

Case 1. A 31 year old man had as his chief complaint ataxia and mental confusion.

The patient dated the onset of the present illness to April, 1955, at which time he noted inability to sleep at night. He became extremely "ill-tempered" and irritable. Bilateral frontal headache of a constant dull aching character was then noted associated with mild confusion and inability to concentrate. At this time he noticed a complete loss of libido. In spite of these complaints he continued to work as the head spinner in charge of two pot-spinning machines in a large industrial plant manufacturing viscose rayon. He was constantly exposed to variable concentrations of carbon disulfide gas. On May 1, while at work he suddenly became extremely ataxic, unable to walk or to maintain proper balance when sitting erect. He then became disoriented, nauseated and extremely weak. After a brief rest at the First Aid Station he was admitted to Memorial Hospital under the care of his family physician.

During this period of hospitalization the presence of a marked memory defect was noted. He also demonstrated visual and auditory hallucinations, mental confusion and irrationality. Routine laboratory and X-ray studies were negative and at the request of his family he was discharged.

On May 27, 1955, he was seen in consultation, at which time he complained of ataxia, memory defect, mental confusion, nausea and vomiting, low back pain, headache and a hacking nonproductive cough.

Physical examination at that time revealed a tall, muscular, well developed man who was obviously ataxic. Temperature, pulse and respirations were normal and the blood pressure was 130/80 mm. of mercury. Abnormal physical findings were limited to the neurologic and psychiatric examinations. There was a definite nystagmus on left lateral gaze with the fast component to the right. Bilateral corneal analgesia was present. This finding was confirmed by an opthalmological consultant. The remainder of the cranial nerves were intact. Deep tendon reflexes were generally hyperactive and the superficial reflexes were normal. The Babinski reflex was absent. Proprioception was impaired particularly in the left leg. The Romberg test was strongly positive. There was a spotty area of hypesthesia on the lateral surface of the left leg and left foot. Throughout the examination he exhibited peculiar behavior with inappropriate laughing and giggling. There was difficulty in maintaining his train of thought.

Laboratory studies revealed a red blood cell count of 6,000,000 per cu. mm. with 16.5 Gm. of hemoglobin per 100 cc. The white blood cell count was 11,850 per cu. mm. with a normal differential count. Complete urinalysis was negative. A series of liver function studies was normal. An electroencephalogram was normal. An upper gastrointestinal X-ray study revealed an active duodenal ulcer.

This patient has been followed closely for 11 months. There has been gradual improvement in locomotion and his Romberg test is now negative. A very mild nystagmus persists, but the corneal analgesia has disappeared. His mental aberrations have subsided but he continues to manifest neurasthenia, weakness and ease of fatigue. His libido has improved considerably. All laboratory studies continue to remain normal.

Case 2. A 54 year old white man was first seen on January 27, 1956, because of nervousness and personality change which had occurred over the past year.

Although the patient had tended to be nervous all of his adult life, both he and his wife had noted a definite and progressive change within the last year. During this time he had noted an intense feeling of "inward nervousness" and severe emotional lability which resulted in uncontrollable crying. He had also experienced periodic episodes of an intense desire to do acts of violence or bodily harm. There had been no visual or auditory hallucinations, but mild mental confusion and memory defect had been noted occasionally. He also complained of diurnal somnolence and noc-

turnal insomnia, anorexia, ease of fatigue, irritability and occasional sensations of "black out" with sudden changes of position. There had been frequent episodes of dizziness associated with difficulty in maintaining his balance. During the month prior to his initial examination he had complained of constipation with excessive mucus, abdominal bloating, gaseous distention, belching, excessive flatus and lower abdominal pains.

Since 1934 this patient has been employed as a chief operator in the viscose mixing room of a large industrial corporation manufacturing viscose rayon. He was constantly exposed to variable concentrations of carbon disulfide gas, and he voluntarily stated that all of the above complaints were more severe after he had been exposed to unusually high concentrations of gas. His wife stated that occasionally he would have the odor of carbon disulfide on his breath when returning from work.

Physical examination revealed only abnormalities of the nervous system. Definite bilateral corneal analgesia was noted and confirmed by an opthalmological consultant. The cranial nerves were otherwise intact. The deep tendon reflexes were normal and superficial reflexes were intact. Muscular power was normal. Complete sensory examinations revealed diminished vibratory sensibility and spotty areas of hypesthesia in the right leg to the level of the hip. The Romberg test was negative.

Laboratory studies revealed a red blood cell count of 4,620,000 per cu. mm., white blood cell count of 13,950 per cu. mm. with a normal differential count. Complete urinalysis was negative.

The patient was removed from his industrial environment and treated expectantly. One month later considerable improvement in his neuropsychiatric difficulties was noted. Corneal analgesia had completely disappeared and his neurologic examination was negative. During the period of treatment a new ventilation system was installed in his work area. He has now returned to work and remains asymptomatic.

Comment

Carbon disulfide is a colorless liquid having a characteristic disagreeable odor. It has numerous uses in industry as a solvent. Its most common application is in the manufacture of artificial silk or viscose rayon. It is in such a process that its hazards are greatest, as exemplified by all the patients whom we have observed. It is used also in the extraction of oils from bones, seeds and flowers and in the manufacture of varnishes, lacquers and Cellophane.

Intoxication by inhalation of carbon disulfide vapor leads to a remarkable variety of signs and symptoms. Exposure may be acute or chronic. As pointed out in Tice's *Practice of Medicine*,[1] the minimal acute exposure may result in mild symptoms such as headache, dizziness, vomiting, diarrhea, palpitation, weakness and fatigue. More moderate acute exposure may lead to severe neuropsychiatric aberrations such as mental excitement, hallucinations, impulsive laughing or crying, impulsive acts of violence, confusion, delirium and even convulsions and death. The two patients reported above demonstrated many of these manifestations during periods of acute exposure.

Chronic exposure is more common, and the symptoms of chronic intoxication are equally as variable. Kleinfeld and Tabershaw[2] have pointed out that in the milder forms symptoms may be mistaken for neuralgia and neurasthenia of nonspecific origin. These symptoms may exist for many years before the relationship to the patient's industrial environment is discovered. Fatigue, insomnia, irritability and sluggishness without objective neurologic findings are common complaints. We have been impressed also with the frequency of diurnal somnolence and nocturnal insomnia. In the more severe types of chronic exposure a wider variety of signs and symptoms may develop. These may involve any of the special sensory organs, with loss of sexual libido, tinnitus, visual disturbances and retrobulbar neuritis. Peripheral neuropathy is quite common and may vary from spotty areas of hyperesthesia or hypesthesia to actual peripheral muscular weakness with foot drop, etc. The widespread nature of the neurologic involvement is demonstrated by the reported occurrence of parkinsonism, and the presence in the cases reported above of nystagmus, cerebellar dysfunction, and corneal analgesia. This latter sign has been a constant finding in our patients and of considerable diagnostic aid. Its presence is mentioned rarely in the American literature but has been stressed by at least one other observer.[3] We believe it to be a valuable diagnostic sign.

Kleinfeld and Tabershaw[2] have referred to the unusually high incidence of peptic ulceration among workers exposed to carbon disulfide. A direct causal relationship has been suspected by many authors. The incidence of gastrointestinal disease

among workers in artificial silk factories exposed to carbon disulfide is reported to be 17.7 per cent, while all other textile factories show 2.7 per cent. It is of interest that the first patient developed a duodenal ulcer and the second patient had the syndrome of irritable colon.

The prognosis in these patients is variable. Many authors feel that the clinical picture is usually reversible, although others stress the irreversibility of severe neurologic and psychiatric symptoms.[4] We have seen one patient with an initial acute exposure who was brought to the hospital in an acute maniacal delirium. Within one week his mental symptoms cleared completely and no sequellae were noted at three and six months follow-up. On the other hand, Case 1 reported above showed moderate initial improvement but considerable deficit remained at the end of eleven months.

No specific treatment is known. Obviously, in the acute case the patient should be removed immediately from the source of exposure, and efforts should be made to reduce the concentration of gas to which the chronically ill patient is exposed. Prevention depends on close medical and engineering control. The American Standards Association has established the safe air concentration level of carbon disulfide vapor at 20 parts per million (ppm).[5] This level apparently has not received universal acceptance and many industrial hygienists recommend a maximum allowable standard of 10 ppm. With newer engineering technics effective ventilation of work areas should make such a standard feasible.

Summary

Two cases of carbon disulfide poisoning have been reported. These demonstrated the wide variety of signs and symptoms encountered in acute and chronic exposure to carbon disulfide vapor. The predominance of neurologic and psychiatric manifestations have been stressed. The finding of corneal analgesia was thought to be a valuable diagnostic sign.

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Non-Suppurative Osteitis Pubis in the Female. J. Bone & Joint Surg., 38A, 500, Leon L. Wiltse and Charles H. Frantz.

Thirteen women are presented in this paper with a disease similar to, but not identical to, osteitis pubis seen so frequently in men. The disease, as seen here, was nonsuppurative and noninflammatory and developed in the anterior portion of the pelvic girdle. In five of the women, the symptoms were first noted during pregnancy. In five others, the symptoms appeared within two months after delivery and in one, the symptoms developed after an injury.

Typically, the patient notes pain about the symphysis. The pain may be quite severe so that the patient becomes bed-ridden. Physical examination reveals tenderness over the symphysis without any swelling or fluctuation. Blood and urine studies are normal and the temperature is normal or, at the most, slightly elevated. Radiograms may reveal no abnormality clearly but, as the disease progresses, one will see spotty demineralization of the bone adjacent to the symphysis, widening of the symphysial gap and, finally, gradual development of sclerosis and narrowing. These changes are symmetrical. The authors believe this condition to be the result of a localized reflex neurovascular dystrophy, precipitated by a combination of trauma and predisposing changes at the symphysis. Predisposing changes are due to the influence of certain hormones and, in this series, many of the cases were related to pregnancy.

Treatment consists of sedation, bed rest and local heat. The disease is self-limiting and treatment serves little usefulness, other than symptomatic relief of symptoms. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

This summary provides information on what the prognosis is in certain types of malignancy.

FIVE-YEAR FOLLOW-UP OF PATIENTS ADMITTED TO SIX TUMOR CLINICS IN TENNESSEE, 1947-1949

CECIL B. TUCKER, M.D., AND SARA LOU HATCHER, M.A., Nashville, Tenn.*

A study of patients admitted to tumor clinics in Tennessee was begun by the Tennessee Department of Public Health in 1947. The purpose was to study the life experience of these patients according to type, site, and extent of the malignant neoplasms and other variables such as sex, age, etc. The six clinics which are participating in the study are Erlanger in Chattanooga, Nashville General, Meharry, and Vanderbilt in Nashville, West Tennessee in Memphis, and East Tennessee in Knoxville.

A summary record is completed by the clinic for every patient admitted for the first time with a malignant neoplasm and is sent to the Tennessee Department of Public Health. For information regarding status (living or dead) the clinic is queried at yearly intervals after diagnosis. If the clinic is unable to give the status of the patient, a query is sent to the health department in the county where the patient is a resident. Also, data regarding cause of death are obtained from death certificates on file in the State Health Department.

Follow-up data are available for five years for patients admitted to the participating clinics in 1947, 1948, and 1949. Although many factors are considered in this study, the present discussion is restricted to findings by site and extent.

*From the Tennessee Department of Public Health, Nashville, Tenn.

The number and percentage distribution of the patients admitted according to site, by extent, are given in table 1. There were 2,476 patients with malignant neoplasms admitted to the clinics during 1947, 1948, and 1949. The two sites which accounted for more admissions than others were skin and female genital organs with approximately one-fourth of all admissions for each. Other sites in order of frequency were breast, buccal cavity and digestive organs, male genital organs, and respiratory system. All sites for which less than 75 persons were admitted were included in the "other" group. This includes urinary system, brain, bone, lymphatic system, etc.

Of the 2,476 patients, 600 or 24.2 per cent were stated to have localized lesions, 719 or 29.0 per cent were stated to have regional involvement and 435 or 17.6 per cent were thought to have remote metastasis at the time of admission. The extent was not classified on the records for 722 or 29.2 per cent of the lesions.

As might be expected, malignancies of the inaccessible sites were generally discovered late. Remote metastasis was stated to be present on admission for more than one-third of the malignant neoplasms of digestive and respiratory systems. Regional involvement was stated to be present for more than one-half of the malignant neoplasms of breast. The lesion was stated to

Table 1.

Number and Percentage of Patients with Malignant Neoplasms Admitted to Participating Clinics, According to Site, by Extent, Tennessee, 1947-1949

Site	Total		Localized		Regional Involvement		Remote Metastasis		Not Classified	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Total	2476	100.0	600	24.2	719	29.0	435	17.6	722	29.2
Buccal cavity	199	100.0	49	24.6	63	31.7	31	15.6	56	28.1
Digestive organs	199	100.0	23	11.6	57	28.6	70	35.2	49	24.6
Respiratory system	82	100.0	15	18.3	23	28.0	29	35.4	15	18.3
Breast	309	100.1	42	13.6	173	56.0	53	17.2	41	13.3
Female genital organs	624	100.0	81	13.0	233	37.3	157	25.2	153	24.5
Male genital organs	103	100.0	20	19.4	34	33.0	31	30.1	18	17.5
Skin	652	100.0	320	49.1	79	12.1	17	2.6	236	36.2
Other	308	100.0	50	16.2	57	18.5	47	15.3	154	50.0

be localized for practically one-half of the malignant neoplasms of skin and one-fourth of those of buccal cavity.

The status of 2,283 of the 2,476 patients was known at the end of five years. Thirty-three per cent of the patients died during the first year and 46 per cent were dead by the end of the second year. By the end of five years nearly two-thirds (62 per cent) of the patients had died.

Mortality varied according to site. Cumulative mortality by site for the five years is shown in figure 1. Approximately two-thirds of those with malignant neoplasms of digestive organs and respiratory system died during the first year of experience. By the end of five years over 80 per cent of these patients wre dead. The percentage dying during the first year for these two sites was about equal to the percentage at the end of five years for patients with malignancies of buccal cavity, breast, female genital organs, and male genital organs. The increase in mortality for sites other than digestive and respiratory systems was more gradual. Approximately one-third of those with malignant neoplasms of buccal cavity, breast, male genital, and female genital organs died during the first year with the remainder of the deaths occurring during the next four years. Mortality of those with malignancies of the skin was much lower. This figure points out that mortality was highest for the inaccessible sites, next highest for the partially accessible sites and lowest for the accessible site, skin.

How does extent of the disease affect these rates? If remote metastasis was present at the time of admission to the clinic, approximately three-fourths of the patients were dead at the end of the first year and by the end of five years more than 90 per cent were dead (Figure 2). When there was regional involvement mortality was much lower with approximately one-third dying during the first year. Nearly three-fourths were dead by the end of five years. As would be expected, mortality for those with localized lesions was even lower. Less than one-half of the patients in this group died during the first five years of observation.

FIGURE 1

MORTALITY OF CANCER PATIENTS AOMITTEO TO TUMOR CLINICS IN TENNESSEE, 1947-1949, BY SITE, OURING FIVE YEARS OF OBSERVATION

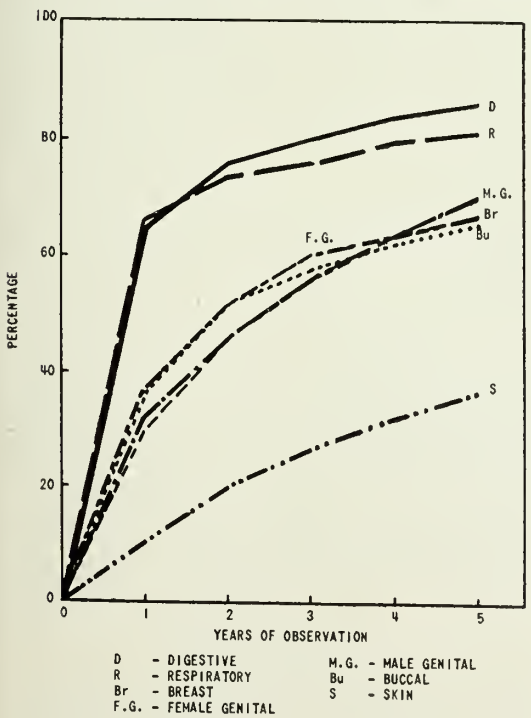
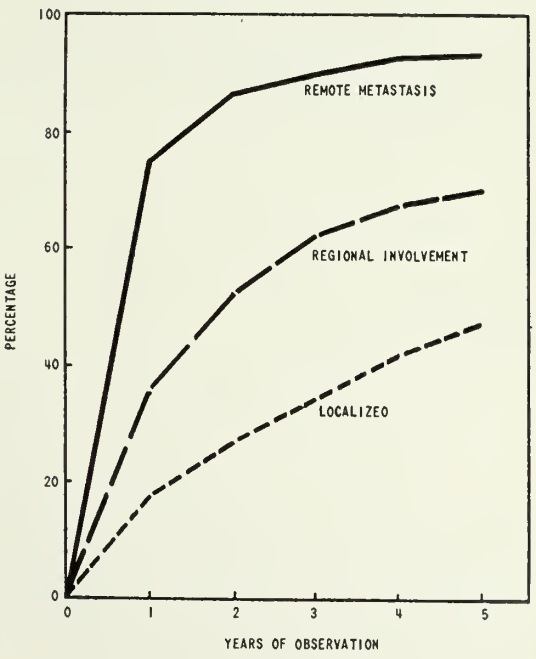


FIGURE 2

MORTALITY OF CANCER PATIENTS (EXCLUDING SKIN) AOMITTEO TO TUMOR CLINICS IN TENNESSEE, 1947-1949, BY EXTENT OURING FIVE YEARS OF OBSERVATION



There were 1,497 deaths among the 2,476 patients admitted. The cause of death was definitely stated to be malignant neoplasm on the death certificates of nearly three-fourths (72.5 per cent) of the patients. Plans are in progress to study these deaths to see

how many were due to the same malignancy as was diagnosed on admission to the clinic, how many were due to another malignancy, etc.

Although the above data are for clinic patients, a specific segment of the population, they serve to present pertinent information regarding certain phases of morbidity and mortality from malignant neoplasms in Tennessee.

The Clinical Picture of Aneurism of the Abdominal Aorta. Enselberg, Charles D. Ann. Int. Med. 44:1163, 1956.

In this article the author reviewed the clinical features of aneurism of the abdominal aorta in 37 cases, and, in addition, made a fairly comprehensive survey of the literature.

As a result of an increase in the life-span and an increase in arteriosclerosis, aneurism of the abdominal aorta has become more common in recent years. At the same time, syphilitic aneurisms which occur predominantly in the thoracic aorta, but which also occur in the abdominal aorta, have been less frequently observed.

Arteriosclerotic aneurisms of the abdominal aorta almost always arise below the renal arteries and syphilitic aneurisms above. Vertebral erosion is rare in arteriosclerotic aneurisms. Severe coronary arteriosclerosis with myocardial infarcts or fibrosis was noted in 16 of 21 autopsied cases.

Although pain is the leading symptom, in at least one-fifth of the published cases pain was not a significant finding. It is deep-seated, aching or throbbing, and sometimes modified by a change in posture. In 8 cases it simulated renal colic.

The chief physical finding is a palpable mass usually in the lower epigastrium, umbilical region, left hypochondrium or left lumbar region. Although pulsations are often felt, murmurs and thrills are uncommon. Tenderness is not an uncommon finding, according to the author's series. The only pathognomonic physical sign, however, is a palpable expansile tumor, but this should not be a *sine qua non* for the diagnosis, and tenderness is most helpful in differentiating aneurism from a buckled arteriosclerotic abdominal aorta.

Roentgenography frequently establishes the diagnosis. Plain films in the anteroposterior and lateral views, and occasionally oblique view, are usually sufficient. Calcium deposits may outline the aneurism.

The likelihood of rupture is great. In most cases this catastrophic event occurs suddenly, having been ushered in by severe abdominal or back pain or "renal colic." Hemorrhagic shock supervenes and most patients remain surprisingly alert and conscious for a few hours. Only one patient in the author's series is known with certainty to be in good health five years after the discovery of her aneurism. This gloomy outlook is being gradually alleviated by the development of better surgical techniques for plastic repair. (Abstracted for the Middle Tennessee Heart Association, by Fred Goldner, Jr., M.D., Nashville.)

ERRATUM

Abstract, August, 1956, page 269.
Authors: Engelberg, H., Kuhn, R., Steinman, M. (instead of Goldner)
Third sentence should read, "Over a two-year time interval 4 cardiovascular deaths were tabulated in the heparin series and there were 21 cardiovascular deaths in the control group."

This paper emphasizes the dangers of making a drug too enticing and toothsome. Furthermore, it points up the need for education of parents concerning the "harmless" aspirin.

ASPIRIN POISONING IN CHILDREN: Report of 5 Cases.

FELIX G. LINE, M.D., Knoxville, Tenn.

Modern drugs for the pediatric age group have been made so attractive and palatable that they have become a menace for young children in quest of something sweet and flavored. This has been especially true of aspirin which is considered by the public as a harmless drug. It is present in every medicine cabinet and other places where a toddler can push a chair, climb up, and help himself. Parents frequently will give the child a bottle of aspirin to play with and will attach no significance to the fact that a large number of the tablets are subsequently missing and might have been swallowed by the child.

It has been my impression that the frequency of accidental ingestion of aspirin is increasing; seldom does a week go by in pediatric practice without at least three or four calls from parents whose children have swallowed some household poison, the majority of which, recently, has been aspirin.

Since 1932 candy aspirin has been sold as a prescription drug, but only since 1948 has it been available as an "over the counter" product. In the prewar period, 20 per cent of the fatalities from aspirin occurred in preschool children. In 1951, 80 per cent of the fatalities occurred in preschool children, approximately four times the death rate for an average prewar year. These figures, although not conclusive, would tend to incriminate the more easily obtainable and readily accessible candy aspirin.[1]

During the last week in March, 1956, five cases of aspirin ingestion were encountered within a period of five days in my practice. Four of the five each presented a different type of problem. The purpose of this paper is to present these cases and briefly to review the subject of aspirin poisoning in children.

Case Reports

Cases 1 and 2. Darryl S., boy, age 15 months and Debra S., girl, age 3½ years were seen in the emergency room of the East Tennessee Baptist Hospital on March 25, with the history of having been found eating candy aspirin from the bottle.

It was estimated that both of them together ate some 20 to 25 grains. Gastric lavage was done on both of them about 1 hour after ingestion. They were dismissed and showed no further symptoms.

Case 3. Georgia R., girl, age 22 months, was found eating candy aspirin from the bottle at about 7:30 a.m. on March 22.

It was estimated that she ate 40 to 50 grains of the one and a fourth grain tablets. Gastric lavage was done at 9 a.m. and she was admitted to the East Tennessee Baptist Hospital. There was a history of fever and cough for 2 days and exposure to rubeola two weeks previously. Physical examination showed bilateral otitis media and typical Koplik's spots. Carbon dioxide combining power was 28 vol. per cent (12 meq./1); the blood pH was 7.3. Urinalysis showed positive test for acetone and positive test for salicylates; the reaction was acid.

She was transferred to the contagious unit of Knoxville General Hospital where she was given vitamin K intramuscularly, and watched closely. The typical rash of rubeola appeared the next day. The otitis was treated with penicillin. She did not develop hypernea or other symptoms of aspirin poisoning.

Case 4. Emma H., girl, age 24 months, at 10 a.m. on March 26 was found eating candy aspirin from the bottle.

She vomited a few minutes later. At 3 p.m. she began to show deep and rapid breathing which became progressively worse until the time of admission to the East Tennessee Baptist Hospital at 9:30 p.m., 12 hours after ingestion. It was estimated that she ate about 25 grains of aspirin. The parents did not call me until just before admission to the hospital.

At this time she was fully alert, but was somewhat pale and apprehensive. The respiratory rate was 38 per minute and was fairly deep. The carbon dioxide combining power was 38 vol. per cent (17 meq./1); the blood pH was 7.58. Urinalysis showed a positive test for acetone and a positive test for salicylates. Since the child was taking fluids well orally without vomiting, and had only mild dyspnea, no parenteral fluids were given. Orally she took large quantities of water, "coke," fruit juice, and lemonade. Vitamin K was given intramuscularly. Her pulse and respiration were determined frequently and within 12 to 18 hours the mild dyspnea had subsided. She was dis-

charged home after being observed in the hospital for 36 hours.

Case 5. Allen M., boy, age 18 months, was found by his parents at 10 a.m. on March 23 playing with an empty aspirin bottle which had contained both five grain and one and a quarter grain aspirin tablets.

It was estimated that 50 to 65 grains of aspirin were missing. No one saw the child eat the aspirin and the parents did not give the missing aspirin a second thought until later when the child was in critical condition. He showed no symptoms until that evening when he refused his evening meal and was irritable. During the night, he vomited six or eight times. On the morning of March 24, he had slight fever, slightly labored respiration, and a cough for which he was hospitalized by his physician in a neighboring town. He was given penicillin intramuscularly and Terramycin orally. The vomiting subsided, but his respirations became more labored and rapid as the day went on. Late in the night of March 24, he lapsed into coma, and respirations were extremely labored.

The child was first examined by me at 5 a.m. March 25 about 38 hours after the ingestion of aspirin. However, the parents had not mentioned the aspirin until this time and even then they volunteered the information in a casual off-hand manner. The child was comatose, completely unresponsive, and had grunting respiration. Scattered rales could be heard in both sides of the chest. He was pale and dehydrated.

At East Tennessee Baptist Hospital the carbon dioxide combining power was 16 vol. per cent (7 meq./1); the blood pH was 7.04. Urinalysis showed positive tests for acetone and for salicylates; the reaction was acid. Hematocrit was 26 per cent.

A "cut down" on a vein was done and he was given 3.75 Gm. of sodium bicarbonate in 100 cc. of water immediately. Over the next 24 hour period he received the following fluids: 500 cc. M/6 lactate, 500 cc. 10 per cent glucose in distilled water, 400 cc. of whole blood, and then 800 cc. 10 per cent of glucose in distilled water. Procaine penicillin 600,000 units was given daily, and "Hykanone" 5 mg. was given every 6 hours for three doses.

Within six hours the respirations were quieter and he was moving about in the bed. He was still comatose but reacted to painful stimuli. At this time the carbon dioxide combining power was 34 vol. per cent (15 meq./1) and the blood pH was 7.7.

Twelve hours after beginning treatment, he had opened his eyes and appeared to recognize his mother. Respirations were quieter and he was taking small sips of water by dropper.

Twenty-four hours after admission the carbon dioxide combining power was 60 vol. per cent (26 meq./1) and the blood pH was 7.44. He seemed oriented, talked with his mother, and began to take a soft diet.

By March 28, he was normal except for general weakness, and he was discharged home three days after admission.

Discussion

An overdosage of salicylates causes a direct stimulation of the respiratory center and a resulting hypernea which is usually the initial symptom. This hypernea lowers the alveolar carbon dioxide tension which in turn results in a rise in blood pH above 7.4 (respiratory alkalosis). The body attempts to compensate by excretion of the bicarbonate through the kidneys thus lowering the CO_2 content of the blood. So, there is, paradoxically, respiratory alkalosis with a lowered CO_2 content of the blood. If the CO_2 content alone is relied upon in this stage of salicylate poisoning, sodium lactate or bicarbonate might be given and thereby push a transient, usually harmless, respiratory alkalosis to a dangerous level and concomitant tetany. If facilities are available, blood pH should be determined along with the CO_2 content, and if the pH is elevated above the normal of 7.4, lactate and bicarbonate should not be given. If the blood pH cannot be obtained and several hours have elapsed since the dyspneic patient has ingested aspirin, it is probably safe to assume that he has reached the stage of metabolic acidosis and should be treated with the alkalinizing solutions. Urinary pH may be helpful, since it becomes acid when acidemia develops.[2] So, in summary, the first phase of aspirin poisoning is characterized by hypernea, low CO_2 content, high blood pH, and usually alkaline urine.

The second phase, which may take several hours to develop is that of metabolic acidosis. Again hypernea will be present, but the hypernea of metabolic acidosis is a compensatory mechanism, as contrasted to the primary hypernea of respiratory alkalosis due to stimulation of the respiratory center. The hypernea of both phases cannot be differentiated clinically, but will depend on the laboratory findings. The exact cause and mechanism of the acidosis is not clear but is believed to be due to a disturbance of carbohydrate metabolism under the influence of toxic doses of salicylates.[3] In this phase, both CO_2 content and pH are below normal.

In addition to hypernea, there may be other symptoms of aspirin poisoning such as vomiting, convulsive seizures, fever, coma, and bleeding. The bleeding is due to impaired prothrombin production in the liver, and vitamin K is recommended to combat this tendency. The urine usually shows the presence of acetone which is the result of the disturbed carbohydrate metabolism and accumulation of ketones in the blood. There may be a falsely positive test for sugar in the urine which in a child in coma with acetonuria might lead to an erroneous diagnosis of diabetic acidosis. The test for urine salicylates is positive and can be carried out by the following procedure: Place 5 cc. urine in a test tube and boil it vigorously for three to five minutes in order to drive off any diacetic acid that may be present. Cool the tube and add about 5 or 6 drops of 10 per cent ferric chloride solution. If salicylates are present in the urine, a blue-violet color appears.[2]

Treatment depends on the stage in which the patient presents himself. When the ingestion is recent gastric lavage, using large quantities of water, should be done. Sodium bicarbonate causes increased absorption of aspirin and thus should not be used in lavaging. Parents should be warned to report immediately if rapid breathing appears. When hypernea or other symptoms have developed the patient should be hospitalized for close observation and given vitamin K. In moderate or severe cases, a "cut-down" should be done and an intravenous needle tied in place. Respiratory alkalosis is treated by the administration of isotonic saline to provide adequate amounts of sodium and water so that renal compensation can occur and salt depletion prevented. The amount of saline depends on the size of the patient. Those with respiratory alkalosis may show a transition to metabolic acidosis and this should be anticipated and identified by obtaining an estimation of the carbon dioxide content and pH of the blood. Metabolic acidosis is treated by the administration of calculated amounts of sodium lactate or sodium bicarbonate. An attempt should not be made to correct the CO_2 content completely in a single dose because of the ease with which these patients are pushed into alkalosis.

The reported cases illustrate several important aspects of the aspirin poisoning problem:

(1) The ages ranged from 15 months to three and a half years which is the age group of greatest mortality in aspirin poisoning. This age group should have *constant* adult supervision if these accidents are to be prevented.

(2) Case 3 apparently already had a metabolic acidosis due to infection as was shown by a low CO_2 content and a mildly depressed pH immediately after gastric lavage. Her measles and otitis undoubtedly accounted for these findings. This illustrates the fact that many of these children are already sick with fever and infection before toxic doses of aspirin are taken, and this fact has to be considered in interpreting the laboratory data.

(3) Case 4 illustrates the phase of respiratory alkalosis.

(4) Case 5 illustrates the phase of severe metabolic acidosis.

(5) All of these children had eaten candy flavored aspirin which apparently was easily accessible to them.

Summary

Five cases of aspirin ingestion are reported illustrating various aspects of the aspirin poisoning problem. The mechanism, symptoms, and treatment of aspirin poisoning are briefly reviewed.

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CASE REPORT

Amyloid Disease of the Larynx*

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Of the many lesions found in the larynx, only a few have such variation in appearance as to closely resemble many of the more common inflammatory and neoplastic diseases. One of these lesions is amyloid disease, which is seldom diagnosed prior to biopsy and microscopic examination. This is a rare disease which may be classified into two sub-groups: (1) those associated with prolonged suppurative diseases elsewhere in the body such as tuberculosis. syphilis or long standing staphyloccocal infections; and (2) localized tumor-like formations limited to the confines of the larynx, and not associated with chronic wasting diseases. In the first group, amyloid deposits may be found in the kidney, spleen, liver, skin and various other locations as well as in the larynx. However, most of the cases are included in the second group, where amyloid disease is limited to the larynx and none can be demonstrated elsewhere in the body either by clinical or laboratory methods.[1]

Incidence

Erich and New[2] report 18 cases. Of these 9 tumors had undergone amyloid changes, there were 4 localized amyloid tumors, and 5 were of the diffuse subepithelial variety.

Grossly the lesion may vary from a pearly grey to a reddish granular appearance. It may be localized or diffuse lesion, pedunculated or sessile, smooth or rough and though it may occur anywhere in the larynx, its most common site is the vocal cords. This variation in appearance suggests that amyloid deposits occur in preexisting lesions such as fibroma in the pedunculated forms, and chronic inflammatory lesions or granulomata in the diffuse forms.

Pathologically, amyloid disease of the larynx consists of masses of homogenous pink-staining material within the stroma underlying the laryngeal epithelium. This material has the property of absorbing iodine, congo red and crystal violet, thus giving the basis for the diagnostic stains and tests which positively identify amyloidosis.[4] The source of this material is not known, but it has been determined that it is a protein and not a starch derivative as the name "amyloid" implies.[3]

*Read before the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 19, 1956, Memphis, Tenn.

Case Report

Mr. C. B., a 35 year old white man, was first seen on December 1, 1954, with the chief complaint of continuous, painless hoarseness of two years duration. There was no respiratory distress, but on occasions he had coughed up traces of blood in his sputum. There was no history of any significant illness which might have been associated with his hoarseness.

The positive physical findings were limited to indirect examination of the larynx. There was noted an irregular, reddish-yellow tumor mass located on the anterior one-third of the left vocal cord. The tumor involved the anterior commissure and extended into the subglottic region on anterior wall of the trachea for a distance of 1 cm. The attachment was broad and the surface was rough and granular in appearance. There were no palpable nodes in the neck.

A provisional diagnosis of low grade carcinoma of the larynx was made, and on December 4, 1954, a direct laryngoscopy and excisional biopsy were done.

The report by the pathologist was "amyloid disease of the larynx." This diagnosis was confirmed by crystal violet stains.

The chest X-ray was reported to be within normal limits and a Congo red absorption test ruled out extensive amyloid disease elsewhere in the body.

Although a slight hoarseness remains following biopsy, the patient's voice has improved markedly, and over a one year and three month period postoperatively the tumor shows no sign of recurrence.

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CLINICOPATHOLOGIC CONFERENCE

Le Bonheur Children's Hospital*

Endocardial Fibroelastosis

DR. JAMES TUHOLSKI: The conference today concerns a 16 month old infant who had been doing poorly since five and a half months of age and who was considered clinically to have an abnormality of the heart. Our pediatric resident, Dr. William Gordge will present the clinical protocol. Dr. James G. Hughes will discuss the diagnostic possibilities. Dr. Scott Gilmer will then give the autopsy findings. I think you will all find this case of much interest.

DR. WILLIAM GORDGE: This 16 month old white female was admitted to Le Bonheur Children's Hospital with an illness which began at the age of 5½ months.

Present illness: Prior to 5½ months of age, she had been well and apparently normal in all respects. At the age of 5½ months she began to have frequent vomiting, "attacks of abdominal pains," and fever (103 R). Examination at that time by her referring physician revealed an enlarged heart. X-ray studies and electrocardiograms were made at that time. Prior to the onset of the first symptoms, the weight gain had been reasonably normal. At that time (5½ mos.) appetite decreased and weight gain slowed considerably. In the 11 months prior to admission to Le Bonheur Children's Hospital the patient gained only an additional 5 to 6 lbs. The referring physician had previously sent the child to another city where the diagnosis of glycogen storage disease was thought to have been excluded by a negative muscle biopsy. The patient then developed cardiac decompensation and was digitalized and was on maintenance digitalis upon admission to Le Bonheur Children's Hospital a few days later. There was no history of cyanosis nor any noted on admission physical examination.

Physical examination. T. 101°R, P. 132, R. 30, B.P. 75/50. She was a thin underdeveloped female, perspiring profusely and very irritable who had purulent exudate in the nares. Tonsils were enlarged and slightly hyperemic. There was a slant deformity of the chest with the left side being larger than the right side. Respiration was of a grunting type. There were a few scattered rales in the left base. A moderately loud blowing systolic murmur was heard posteriorly; none anteriorly. A 3rd heart sound was present with the suggestion of a gallop rhythm. The liver was palpable 3 cm. below the right costal margin and the spleen was palpable 2 cm. below the left costal margin.

Laboratory data: Urine: trace of protein. Blood: Hgb. 9.4 Gm.%; R.B.C. 3.73 Miltion; Wbc 8,900; differential Segs. 70%, Eos. 2%, Lymph. 24%, Mono. 4%. Cardioangiogram and films of the chest revealed a heart which was extremely large. The contour was rather globular, but the apex was down and out. There was enlargement of all the chambers of the heart, but the left ventricle was the chamber of predominant enlargement.

Course in Hospital: The patient was initially treated with antibiotics and digitalis maintenance therapy. On the fourth hospital day an operation was performed. At operation, under light general anesthesia, cardiac action ceased just as the chest was opened and cardiac massage was begun and continued for about one hour, when cardiac action returned. The proposed operation was then carried out, and the patient left the operating room in poor condition. At the time of leaving the operating room the cardiac action was good and her color and respiration were fair. The patient was placed in a croupette. Heart action ceased about two and a half hours postoperatively and did not respond to stimulants and artificial respiration.

DR. TUHOLSKI: Dr. Hughes will you now give us your analysis of this case?

DR. JAMES G. HUGHES: In conferences such as this the clinician discussing the case often toys with all the possible diagnoses, building up suspension until he finally settles down to consider the most probable one. That is hardly necessary in this patient's case, for I believe you will all agree that this child clearly had serious heart disease and that this was probably the cause of death. Although certain associated conditions will be considered, my chief efforts will be directed toward correlating the patient's signs and symptoms with disease of the heart and attempting to point out the most likely diagnosis.

I like to approach these conference cases line by line, thinking out loud and telling what goes through my mind as the facts emerge. This sometimes leads to statements at the beginning of the discussion that must be altered or retracted later as more information is available in subsequent portions of the protocol. However, the listeners see how the clinician approaches the case, as well as knowing what his final conclusions are. Therefore, I shall follow this step-by-step procedure.

The first fact of importance is that the child was considered well until five and a half months of age. Since we know from later information that the heart was greatly

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enlarged and the child in cardiac failure, this means that we can exclude certain types of congenital heart disease that would have produced early cyanosis, such as transposition of the great vessels, for example. It suggests that the heart disease might have been acquired at this time, a most unlikely possibility, or that a lesion which was present all along was gradually getting worse—by far the more logical conclusion.

The attacks of abdominal pain, next mentioned, were probably related to episodes of decompensation, the pain originating from stretching of the capsule of the liver or from myocardial hypoxia. Liver engorgement is often the first sign of cardiac failure in an infant. Myocardial hypoxia may occur in certain forms of heart disease, especially in cases of anomalous origin of the left coronary artery, and in endocardial fibroelastosis. The associated vomiting may have been reflexly related to the abdominal pain, or may have been caused by edema and poor circulation of the mucosa of the alimentary tract, with consequent impaired digestion and absorption of food.

It is not clear to me whether the fever mentioned in the first paragraph of the protocol occurred in association with the attacks of vomiting and abdominal pain. However, an infant in cardiac failure has congested lungs, and superimposed pulmonary infection is not uncommon. However, the fever could have been due to ordinary upper respiratory tract infection, made more common by the increased susceptibility to infection in a debilitated child.

At five and a half months of age a chest roentgenogram revealed an enlarged heart—the first clear indication that the basic abnormality was probably cardiac. No information is given with respect to the nature of the electrocardiograms made at this time. Although previously the child had been gaining at a "reasonably normal" rate, the appetite now decreased and the weight gain became slow. The anorexia may have been due to chronic, low-grade cardiac failure not clearly proved at this time. Another possibility is that the anemia, noted later in the protocol, had its origin at about this time. The diminished weight gain was probably caused by impaired circulation due to heart disease, the tissues functioning less effectively than normal and receiving less oxygen than normal. Heart disease in young infants impairs growth in two chief ways. If the child has a cyanotic-type lesion (and this child did not have cyanosis) the tissues fail to receive sufficient oxygen to support normal growth. In the absence of cyanosis, as was true in this case, growth may be impaired by reduced blood flow to the tissues. Reduction of blood flow may occur when the cardiac output is normal or supernormal, as occurs in patients with an extremely large patent ductus arteriosus. In this instance the backflow from the aorta through the pulmonary artery may result in great decrease in peripheral blood flow. For instance, in some patients with ductus arteriosus as much as 70 per cent of the left ventricular output flows back from the aorta through the ductus, resulting in impaired body growth. Another cause of impaired circulation in noncyanotic congenital heart disease is reduction in left ventricular output. This is the probable explanation for growth failure in patients with such conditions as endocardial fibroelastosis, or anomalous origin of the left coronary artery, or glycogen storage disease of the heart. Since this patient was never cyanotic, and since we have no strong evidence of a large left-right shunt, I am of the opinion that diminished cardiac output was the cause of growth failure, even before frank decompensation ensued.

We have helpful information that a muscle biopsy performed in another hospital did not show glycogen disease of striated muscle. This tends strongly to exclude glycogen disease of the heart as a probability in this case, and thus narrows diagnostic possibilities.

On admission to the Le Bonheur Children's Hospital there was a slight fever apparently caused by an upper respiratory tract infection evidenced by purulent nasal exudate and hyperemic tonsils. The pulse rate was 132 per minute, which is abnormally rapid. Since the child is said to have been digitalized, one would have expected a slower rate had full digitalization been achieved. On the other hand, the baby had fever, probable decompensation, and may have been emotionally upset on admission, all of which factors would tend to

cause tachycardia. The respiratory rate was abnormally rapid (30 per minute), probably owing to pulmonary congestion with diminished oxygen absorption. Since full oxygenation of the blood apparently could not be achieved with a normal rate of respiration the child breathed more rapidly in order to compensate. Since we know this weakened child also had an upper respiratory tract infection, we cannot exclude the presence of pneumonia superimposed on the congested lungs.

The marked irritability noted on admission was probably due to cerebral hypoxia occasioned by cardiac decompensation, acting in combination with fever, infection and anemia. Myocardial hypoxia could have been a factor.

Now we are told that the left side of the chest was larger than the right, owing to the presence of a "slant deformity," which I interpret to mean precordial bulging. In an infant with a big heart precordial bulging usually implies right ventricular enlargement, for the right ventricle lies anteriorly. However, precordial bulging is occasionally caused by massive left ventricular enlargement of a degree sufficient to force the anterior surface of the heart firmly against the chest wall.

The grunting respiration was probably due to increased respiratory effort associated with the necessity to maintain rapid breathing. The presence of rales in the left base in an infant with a very large heart always makes one think of compression atelectasis of the left lower lobe, a very common finding in such patients. There is a strong possibility that pneumonitis would be present in this compressed area. Cardiac decompensation may have caused these rales, but it is to be noted that no rales were heard on the right. Perhaps the decompensation thought to be present here was mostly right-sided, with hepatosplenomegaly as chief manifestations.

I am at a loss as to why the loud, blowing systolic murmur was heard posteriorly and not anteriorly. The normal blood pressure tells us that this is not a case of coarctation of the aorta, which may produce a murmur heard only posteriorly. The fact that the murmur is loud and blowing suggests turbulent shunting of blood through a septal defect or patent ductus, or the presence of valvular deformity interfering with the passage of blood.

The combination of a third heart sound and "suggestion" of a gallop rhythm implies, of course, that the heart is either teetering along the brink of decompensation or frankly failing. The liver was palpable 3 centimeters below the right costal margin, thus being slightly enlarged. This was most likely due to chronic congestion from decompensation. Spenomegaly was probably secondary to hepatomegaly, and thus also due to decompensation.

The proteinuria was no doubt a manifestation of passive congestion of the kidneys, but perhaps partly due to the presence of fever and infection. The hemoglobin level and the red cell count were both lower than normal, but the hemoglobin was disproportionately low, suggesting an iron deficiency anemia. This was perhaps the result of a poor diet, but was more likely caused by anorexia leading to refusal to take an adequate diet. The infection may have contributed in slight degree to the presence of anemia. The white cell count and differential count were normal.

Now we come to one of the most significant statements in this protocol. We are told that the heart was extremely big and that the chamber of predominant enlargement was the left ventricle. Considering the rest of the clinical picture, massive cardiac enlargement predominantly of the left ventricle suggests two chief entities: (1) endocardial fibroelastosis; (2) anomalous origin of the left coronary artery.

Actually, in some instances it is exceptionally difficult to differentiate these two conditions. Both cause big hearts in little infants, with predominance of the left ventricle. Both manifest themselves in early infancy, both cause digestive disturbances and growth failure, and both tend to produce death within a few months to a year or two. Although in some instances an anomalous origin of the left coronary artery may not cause a characteristic electrocardiogram, in the majority of such patients some evidence of anterior myocardial infarction pattern is recognized. We cannot consistently differentiate these two conditions on the basis of the electrocardiogram. The

babies with anomalous left coronary artery are more prone to have attacks of sudden pain, presumably due to bouts of severe myocardial hypoxia. This patient had such attacks. However, infants with endocardial fibroelastosis are more apt to have a murmur, as this patient did, due to valvular involvement in the fibroelastotic process. From the standpoint of statistical probability, endocardial fibroelastosis occurs far more frequently than anomalous origin of the left coronary artery.

Death in this patient was due, basically, to the underlying cardiac abnormality, but the precipitating incident appears to have been cardiac arrest during the operation.

In view of the above considerations, I am now ready to make my final diagnoses. I believe that this patient had either endocardial fibroelastosis or anomalous origin of the left coronary artery, and I am inclined to think fibroelastosis is the more likely diagnosis from the evidence at hand and from statistical probability. Cardiac decompensation had occurred previous to hospitalization here and the patient had been digitalized, but I believe some decompensation was still present.

She had a clear-cut upper respiratory tract infection. There is a strong likelihood that the left lower lobe was partially atelectatic from compression by the huge heart. It would be strange, indeed, if there were no pneumonitis in this compressed area and the presence of rales limited to this area makes this more probable. There should also be some venous congestion of the lungs.

A relatively minor finding was the mild anemia, but there is insufficient hematologic information to justify much discussion of its nature. On clinical grounds, it was probably mainly an iron deficiency anemia.

DR. TUHOLSKI: Thank you, Dr. Hughes. Dr. Scott Gilmer will now present the autopsy findings.

DR. SCOTT GILMER: The necropsy, performed by Dr. Robert S. Shacklett, was limited to the thorax and the surgical incision was used.

The child had the somewhat emaciated appearance of a chronically ill person. Cyanosis was evident, coffee-ground material filled the nasopharynx, and frothy fluid was present in the nares.

Upon opening the thorax 30 cc. of blood-tinged fluid was found in the left pleural space. No anomalies of the great vessels were found, but the heart was hypertrophied, the transcardiac diameter being 15 cm., while the internal thoracic diameter was 18.5 cm.

The heart was quite large and weighed 150 Gm. The epicardium was hemorrhagic in areas, as a result of cardiac massage at operation. Both right and left ventricules were markedly dilated.

A most striking change was a uniform thickening of the left atrial and ventricular endocardium, which was converted to an opaque yellowish fibrous layer 2 to 3 mm. thick. The left ventricle averaged 10 mm. in thickness, the right ventricle, 4.5, both measurements indicating considerable hypertrophy.

There was no valvular anomalies and the coronary arteries arose in a normal fashion and were not narrowed or occluded.

The lungs were heavy, congested and frothy. Pink fluid was present in the bronchi.

Microscopically, the typical changes of endocardial fibroelastosis were demonstrated. The endocardium was greatly thickened by sparsely cellular fibrous tissue in which elastic fibers were demonstrated with appropriate stains.

A similar change was demonstrated around vascular spaces fairly deep within the myocardium. One is tempted to interpret these spaces as Thebesian vessels, but it is more likely that they are the spaces adjacent to the trabeculae carnae and thus are part of the ventricular cavity.

While the concensus is that fibroelastosis is due to anoxia, in this case no obvious cause of anoxia is present—no anomalous coronary artery and no intracardiac defects.

Consequently, we have classified this as a case of primary or congenital fibroelastosis. We feel the term "dysplasia" detracts from the progress which has been made in this disease and should not be adopted.*

*"It is of considerable interest that recently at the meeting of the section on pathology of the American Medical Association in Chicago, Blackschaeffer presented very convincing evidence that cases of so-called endocardial fibroelastosis as

The etiology here is a matter of speculation. It seems that the theory of Weinberg and Himmelfarb postulating an interference with the emptying and/or filling of the Thebesian vessels is reasonable. Such a change could at least initiate an anoxic state and begin the fibroelastosis which then would perpetuate itself. Injection studies of hearts so affected would be of value in this connection.

DR. TUHOLSKI: I see Dr. Ray Paul in the audience. As you know, he and Dr. Robbins have recently introduced the procedure of pericardial poudrage to encourage adhesions through which new vessels may grow to bring additional blood and oxygen to the myocardium in cases of fibroelastosis or anomalous origin of the left coronary artery. Dr. Paul, I wonder if you would say a few words?

DR. RAY PAUL: Dr. Gwin Robbins and I reported in the August, 1955, issue of Pediatrics an operative procedure for the treatment of patients with endocardial fibroelastosis. The procedure consisted simply of instilling sterile talcum powder into the pericardial sac over the surface of the left ventricle in order to stimulate additional vascularization of the myocardium. This we proposed on the theory that the basic pathophysiology in endocardial fibroelastosis is myocardial ischemia.

The first operation was done in March, 1954, the second in April and the third in June of the same year. Consequently, we have an approximately two year follow-up on these cases. Briefly, their progress has been excellent and two of the three patients have been off of digitalis for at least one and a half years postoperatively. This in itself seems to us indicative of beneficial results from surgery since, previously, continuous digitalis has been the only beneficial form of treatment. We are now preparing a follow-up report which will be submitted to the same journal and in which follow-up on the basis of weight curve and heart size will be specifically mentioned in each case. Thus far, they have all shown a tendency toward increased weight gain and either a decrease in absolute heart size or a cessation of the gradual preoperative increase in transverse diameter of the heart.

It might also be mentioned at this time that we now have a total of ten cases operated with three deaths and all of the survivors doing well clinically. At the present time none of the survivors are receiving digitalis.

I would also like to say a word concerning diagnosis of this condition. There are no clinical or laboratory means of proving this diagnosis beyond autopsy and, of course, this is most perplexing, especially when one has to consider exposing an infant or child to surgery without positive proof. However, in an attempt to add as much information as possible toward diagnosis we have been doing angiocardiography in all of our suspected patients. This is done not so much to exclude any right to left shunt but to demonstrate a characteristic, although not pathognomonic, change from normal. Here we see evidence of enlargement of the left ventricular chamber, delay in emptying of the left ventricle and frequently one can demonstrate a tremendous thickening of the myocardium. Although this does not prove the diagnosis it does add further emphasis to its probability. Then, when one combines a history of an infant doing well for a number of months, suddenly developing respiratory difficulty, loss of appetite and reduction in weight gain with electrocardiographic and X-ray evidence of left ventricular hypertrophy and an angiogram showing delayed emptying of a dilated and thickened left ventricle, there is little else possible except to diagnose endocardial fibroelastosis.

DR. TUHOLSKI: Thank you, Dr. Paul. I see our time is running out, so there will be no opportunity for further discussion of this most interesting case. I want to thank all of the participants.

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well as other idiopathic hypertrophies of the heart, especially seen in children, are a result of a true hyperplasia of myocardial musculature rather than a hypertrophy and that all gross manifestations such as endocardial thickening, etc., are secondary to this. This aspect of these cases of course requires immediate attention and confirmation as to etiology of the hyperplasia, and perhaps a re-evaluation of present surgical approaches to the problem."

Baptist Memorial Hospital*

Bilateral Constriction of the Renal Arteries

Clinical History

This five year old, white male was in good health until he developed a sore throat about September 2. 1955. This was diagnosed by his physician as a streptococcal pharyngitis and tonsillitis and the patient responded quickly to therapy. At this time a C.-reactive protein determination was negative. While the child was being treated for the sore throat, it was noted that he had a cardiac murmur. One week later, the child was examined in another hospital for evaluation of the cardiac murmur. At this time, it was noted for the first time that he had a systemic hypertension of approximately 200/100 mm. Hg. in all extremities. He was completely asymptomatic.

On September 23, 1955, the child was admitted to the same hospital for investigation of the hypertension. He was still asymptomatic and had had no episodes of headaches, dizziness, blurred vision, dyspnea nor dark urine. The past history

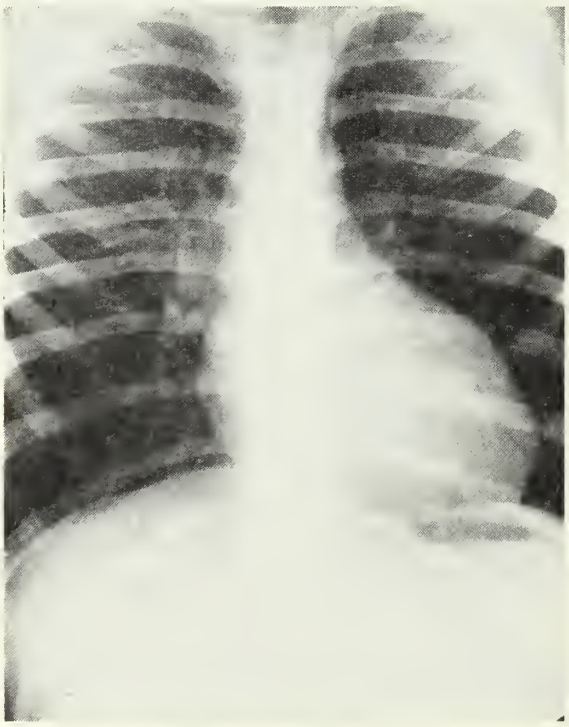


FIGURE 1. Chest X-ray.

was essentially negative. The only positive findings consisted of a mild case of measles and two or three episodes of streptococcal sore throat. There was no history of rheumatic fever or renal disease. The family history was noncontributory. The child had been immunized against diphtheria and pertussis, probably against tetanus but not against smallpox or typhoid.

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FIGURE 2. Intravenous Pyelogram.

The child was well developed and well nourished. The blood pressure in the arms was 200/120 and in the legs 210/130. The eyegrounds were negative. The heart rate was regular. There was a grade two systolic murmur of medium pitch at the apex transmitted to the axilla. The point of maximum impulse was in the sixth intercostal space in the left anterior axillary line. There was no thrill over the precordium. The lungs were clear. The abdomen was negative.

The patient's course in the hospital was uneventful and consisted chiefly of investigative procedures. An intravenous pyelogram showed immediate and good function bilaterally with normal emptying. A small configuration at the ureteropelvic junction on the right was interpreted as being suggestive of either a band or aberrant vessel. It was thought that there was slight hydronephrosis on the right. An aortogram was done by retrograde passage of a polyethylene catheter through the right femoral artery into the aorta and 5 ml. of Sodium Urokon was injected. The renal arteries were visualized and no significant abnormalities demonstrated. A muscle biopsy, done at the same time as the aortogram, was negative. Two Regitine tests were negative for any significant drop in blood pressure. Laboratory data were within normal limits and consisted of the following. Blood: Hgb. 12 Gm. per cent. RBC. 4.37 million, hematocrit 36 vol. per cent, WBC. 9,200 with a normal differential count. Urine: yellow, acid, cloudy, negative for protein and sugar. There was a considerable amount of amorphous debris in the sediment. The specimen was insufficient for a specific gravity determination. An occasional

white cell was seen but there were no red cells. Blood chemistry: N.P.N. 23 mg. per cent, C-reactive protein negative, serum cholesterol 195 mg. per cent, protein bound iodine 12.6 mcg. per cent. (Normal 4-8 mcg. per cent.) The most probable explanation of the abnormal protein bound iodine determination was that the patient had received iodine in the material used in the aortogram and intravenous pyelogram.

After one week in the hospital, the patient was discharged. It was felt there was not enough evidence to warrant surgical exploration at this time. The consultant urologists did not think the pyelogram was abnormal.

An electrocardiogram showed evidence of left ventricular strain.

On November 15, 1955, approximately one and one-half months after the patient's discharge from the hospital, the child was admitted to the Baptist Memorial Hospital for the first time. During the interval between admissions, the child had been well but the hypertension persisted. Since no cause for the hypertension had been demonstrated, emphasis was placed upon the possibility of an abnormality in the kidneys or adrenals, especially in view of the fact that the pyelogram was interpreted by some as being possibly abnormal. While in the hospital, the physical findings were essentially the same as during the previous admission. A Benzodioxane test was done and showed a maximum drop in the blood pressure from 210/120 to 200/110 at four minutes. On the next day, the child underwent surgical exploration of the abdomen. The kidneys and adrenals appeared normal and no tumor masses were found. During the exploration, a small tear occurred in the capsule of the spleen and a splenectomy was performed. Biopsies were taken of both kidneys and adrenals and showed no abnormalities. During operation, the pulse averaged about 120 per minute. Following operation, a small hematoma developed in the abdominal wound and was easily controlled with pressure. Ten hours after surgery, the pulse was 198 per minute and the blood pressure 182/118. The next day, his temperature was 106° and the child went into circulatory collapse. The blood pressure was unobtainable and the pulse was 170 per minute. He was given coramine, Wyamine, fluids and blood but he developed respiratory difficulties and had to be placed in a respirator. His condition deteriorated and the heart rate decreased to 50 per minute. Intracardiac adrenalin was given but the patient expired about 24 hours after operation.

Discussion

DR. CLYDE WARNER: A brief resumé of the case shows that this five year old white male developed a streptococcal infection and afterwards was noted to have a cardiac murmur and severe hypertension. The entire time, he was asymptomatic insofar as the hypertension was concerned and was finally brought to the hospital for cardiac evaluation. At that time, all the tests that were performed were negative with the exception of the intravenous pyelogram. He was eventually explored for renal-adrenal biopsies and died shortly after the operation. I have decided to attack this case from two different angles. First, by discussing various points in the protocol and, secondly, by giving you what I consider a rather complete differential diagnosis of hypertension. We have a five year old boy with an acute streptococcal pharyngitis. We do not know, if this was a proven streptococcal infection, and only about five per cent of the cases of sore throat seen by pediatricians are actually due to a Streptococcus. Later, a cardiac murmur was noted and was described as a grade II apical systolic murmur. There are certain causes for this type of murmur including congenital anomalies, myocardial inflammation, temperature elevation, anemia, etc. However, I believe it is simply a reflection of relative mitral insufficiency due to cardiac hypertrophy and dilatation and can be ascribed to being a functional murmur. The child was noted to have a blood pressure of 200/100, which is a most severe hypertension in a five year old child. The mean at this age is about 86/55. The fact that the hypertension was present not only in the upper extremities, but in the lower extremities as well, just about excludes coarctation of the aorta completely. I would like to take exception to one statement in the protocol and that is that it was felt the abnormalities were of relatively recent origin. Later, we see that the child had cardiac hypertrophy. I believe that usually, in cases of hypertension, it would take some time for cardiac hypertrophy to develop, at a minimum of a few months or longer. I also wonder how many pediatricians take blood pressure readings on five year old children who are asymptomatic. The statements that the abdomen was negative and that there was no evidence of cardiac failure merely serve to show that the child was compensating for his severe hypertension. The electrocardiogram revealed left ventricular hypertrophy and the roentgenogram of the chest substantiated that. The intravenous pyelogram was reported as showing immediate and



FIGURE 3. Aortogram.

good function bilaterally. A small configuration was noted at the uretero-pelvic junction on the right side suggestive of a band or aberrant vessel and there was slight hydronephrosis on that side. I have gone over the films and believe that they are normal. There is a questionable indentation at the right uretero-pelvic junction but I do not believe it is significant. A retrograde aortogram showed no significant abnormalities of the renal arteries. With reference to that statement, a few points should be made. I have found that, at least under experimental conditions, hypertension may result from partial occlusion of a renal artery without any evidence of impaired renal function and, to the best of my knowledge, without evidence of impaired renal blood supply. Also, it has been reported that although the aortogram is a good test, in the face of hypertension it leaves something to be desired. I think that these two points should be considered rather strongly. I think the most important laboratory data consist of the normal urinalysis, normal N.P.N. and the negative c.-reactive protein. These findings lead me away from considering, at least strongly, renal inflammatory diseases such as glomerulonephritis, pyelonephritis, etc.

After admission to the Baptist Hospital, a Benzodioxane test revealed a maximum drop in blood pressure of 10 mm. at four minutes. Previously, two Regitine tests had been reported as negative. I am sure that the clinicians were looking for a chromaffin tumor which would include a paraganglioma and a pheochromocytoma. Because of the confusion in terminology, it is easier to follow the classification of Stout and call all hormonally active tumors of the paraganglionic group pheochromocytomas, and all inactive ones paragangliomas. Hormonally active paragangliomas, or pheochromocytomas, secrete epinephrine and nor-epinephrine which have their effects upon the heart and peripheral blood vessels resulting in an increase in blood pressure. The Benzodioxane and Regitine tests are so-called adrenolytic tests since the reagents destroy circulating epinephrine and nor-epinephrine, thereby decreasing the systemic blood pressure. I think the possibility of the presence of a pheochromocytoma can be excluded in this case. In the adult, pheochromocytomas usually produce a fluctuating type of blood pressure; however, in children, this is not always true. In fact, about fifty per cent of children with pheochromocytomas have sustained hypertension. There have been only eight cases of pheochromocytoma reported in children in the first decade of life. It is a fairly rare tumor in children. There has been only one negative Regitine test reported in the presence of a proven pheochromocytoma. The child was completely asymptomatic insofar as his hypertension was concerned, which helps to exclude a pheochromocytoma. Later, we see that surgical exploration of



FIGURE 4. Renal arteries showing areas of constriction.

the abdomen failed to reveal any abnormality, which also helps to exclude a pheochromocytoma.

On 11/17/55, the child underwent surgical exploration and no gross abnormalities were found. Of course, this helps to rule out such conditions as congenital malformations of the kidney and renal arteries. It also helps to exclude such things as Wilm's tumor, chronic inflammatory diseases or other conditions that cause a change in the gross appearance of the kidney. Following surgery, he developed a hematoma which was controlled easily. Then, he developed a rather severe tachycardia with no appreciable decrease in blood pressure. The next day, he developed a high fever which seems to me to be of a terminal significance. I can think of no other reason for the high fever. Then, the child went into circulatory collapse. The blood pressure decreased but the tachycardia persisted. Certain drugs were given to the child but he developed respiratory difficulties and was placed in a respirator. This might make one think of the possibility of pulmonary emboli and also of aspiration with a rather severe and acute pneumonia following surgery. Nevertheless, his condition continued to deteriorate and the heart beat decreased to 50 per minute. Nothing seemed to help and the child died about 24 hours following surgery.

I think that a differential diagnosis of the cause of death is as difficult, if not more difficult, than the differential diagnosis of the hypertension. I can only postulate as to certain things that may have happened. He might have had an acute coronary occlusion. I doubt if this represents a pheochromocytoma crisis because, with this crisis, there is usually a drop in blood pressure occurring immediately or shortly after the tumor is removed. A retroperitoneal hematoma might be considered. Cerebral thrombosis or hemorrhage might also be considered although there were no signs indicative of these disorders. He might have gone into cardiac failure but there is nothing in the protocol to indicate that. Adrenal crisis should be considered. The child did have a bilateral adrenal biopsy. However, there is no history suggestive of an adrenal crisis other than the decrease in blood pressure which seemed to have remained elevated for some time. The shock of the surgery and possibly of the anesthesia brought this child over the line and this is my choice as to the cause of death.

A differential diagnosis of hypertension includes about five factors. Renal factors are by far the most common in children. The acute and chronic inflammatory diseases of the kidney, such as glomerulonephritis, pyelonephritis, etc., can be excluded due to lack of urinary findings and a negative intravenous pyelogram. Other conditions which might cause hypertension include hydronephrosis, hypoplastic kidney, Wilm's tumor and polycystic kidney. I believe these can be excluded on the basis of the negative pyelogram and direct visualization at surgery. There are some other conditions which should be considered but which I have not considered strongly. These include the Kimmelstiel-Wilson lesion, or diabetic glomerulosclerosis, necrotizing nephritis, amyloidosis and tuberculosis. There is one renal etiological factor that I have left until last because I think it has possibilities and that is either congenital or acquired abnormalities of the renal arteries. These would include thrombosis or embolism, congenital bands, intimal hyperplasia and aneurysm. I do not believe that this possibility has been excluded completely although the protocol suggests differently. Other etiological factors which might be mentioned include cerebral disease such as increased intracranial pressure, diencephalic disorders, hypothalamic tumors, pontine tumors, depressed psychosis and encephalitis. I do not believe that there is enough evidence to consider these possibilities strongly; however, it might have been interesting to have seen what the electroencephalogram would have shown. Actually, there is no reason to suspect an intracranial lesion in this case. Cardiovascular etiological factors include coarctation of the aorta, which we have eliminated previously, periarteritis nodosa, lupus erythematosus and Buerger's disease. The last three of these diseases may affect the kidney and smaller arterioles directly; however, I do not believe we are dealing with any of these diseases in this case. If such a disease had involved the renal arterioles to the extent of producing a hypertension of the

severity noted in this child, there should have been abnormal urinary findings and some decreased excretory function in the intravenous pyelogram. Still other conditions should be mentioned although I consider them unlikely. These conditions include aortic insufficiency, arteriovenous fistula and heart block. Hormonal factors include pheochromocytoma, which has been discussed, Cushing's syndrome, adrenal virilizing tumor, adrenal cortical tumor and congenital adrenal cortical hyperplasia, all of which can be excluded, I think, on the basis of lack of positive information. It would have been interesting to know the level of 17-ketosteroid excretion in this case; however, I think it would have been within normal limits. Miscellaneous factors in the production of hypertension include the Riley-Day Syndrome, which is an intermittent rise in blood pressure accompanied by sweating, salivation, skin lesions and absence of tears. In achrodynia, there is a history of emotional disturbances, skin lesions and sweating. Still other miscellaneous factors include Vitamin D poisoning, poliomyelitis, lead poisoning and polycythemia of certain types.

We are faced with the problem of essential hypertension which has no known etiology. The diagnosis of essential hypertension can be made only after all other causes have been excluded. If this had been an adult, we would have had a fairly easy case since about 95% of all adults with hypertension are considered to have essential hypertension. However, in children, the figures are just the opposite, if not more so. There have been about one hundred cases of essential hypertension reported in children and the younger the child, the less the possibility of essential hypertension. In essential hypertension, the increased blood pressure may be present for some length of time without producing any symptoms and this is in favor of the diagnosis of essential hypertension in this case. In children, essential hypertension runs a much more rapid course than in adults. We do not know how long this child had hypertension. Essential hypertension seems to be of about the same frequency in males and females and there seems to be a definite familial tendency. We do not have any family history of hypertension in this case. The factors which are against the diagnosis of essential hypertension are the lack of a family history, the rarity of the disease in children, the lack of decisive data eliminating other causes. I think that additional kidney function lists should have been performed as well as a Basal Metabolism Rate, response to sedatives, electroencephalogram and 17-ketosteroid determination. In the absence of information clearly indicating a specific etiological factor in this case, and in spite of statistical consideration, I am forced to conclude that the patient has so-called essential hypertension. My secondary diagnosis is of partial occlusion of one or both renal arteries producing a so-called Goldblatt kidney with hypertension.

DR. PHIL E. ORPET, JR.: Contrary to most Clinical Pathologic Conferences, I think the manner of death may be very important in helping us to make a diagnosis. I think that everyone agrees that the most common cause of hypertension in a child of this age is renal disease. I agree with Dr. Warner that this has been fairly well ruled out with the possible exception of a small obstruction of one of the renal arteries. Essential hypertension in a child this young is very rare but it seems that since everything else has been ruled out we will have to make this diagnosis. Right here, I have to disagree with Dr. Warner. I do not believe that we can feel safe in assuming that pheochromocytoma has been ruled out for the following reasons. False negative tests with Benzodioxane and Regitine have been reported and I do not believe they are quite so rare as Dr. Warner would have you believe. It is true that Regitine has been used for only about four years and it may be that there is no more than one false negative test reported in the literature but there are any number of reported false negative Benzodioxane tests. Probably, there are some unreported false negative Regitine tests. A pheochromocytoma may be very small and it is possible that the surgeon could have overlooked a small pheochromocytoma even had it been in the abdomen. In addition, these tumors can occur outside the abdomen and abdominal exploration does not rule out the possibility of a tumor in the ganglia of the sympathetic

chain, carotid body, etc. I feel that the manner of death is somewhat in favor of the diagnosis of pheochromocytoma. Postoperatively, this patient developed a tremendous tachycardia although we do not know exactly how soon after the operation it developed. It is intimated that it was ten hours after surgery. I would be interested to know what the blood pressure recordings were during surgery but there is no mention of them. About 10 hours after surgery, the blood pressure was down somewhat from the preoperative level. The following morning, the patient developed a hyperpyrexia, went into circulatory collapse and died. This is almost a classical description of the manner in which a patient with a pheochromocytoma will die after a prolonged episode. The surgery, anesthesia and the terrific amount of manipulation involved in obtaining a biopsy of each kidney and adrenal gland would certainly be enough stimulus to throw this patient into a severe episode. By that I mean markedly increasing the secretion into the blood stream of nor-epinephrine and epinephrine. I can hardly account for this manner of death in any other way. As a matter of fact, when I first read the protocol it was the most disturbing thing to me about the patient. Therefore, my primary diagnosis is pheochromocytoma and I must confess that I cannot rule out an arterial obstruction of one or both kidneys. It was mentioned that the blood pressure is usually of a fluctuating type with a pheochromocytoma in adults. I do not believe that this is borne out in the literature. I think that at least 50-60 per cent of the cases have a sustained hypertension and in some series the incidence of sustained hypertension has been reported as high as 75 per cent.

DR. THOMAS C. GLADDING: Before discussing the diagnosis, I would like to show you the X-ray films of the chest, the intravenous pyelogram and the aortogram so that you may make your own decisions as to what they may show. The chest film shows the cardiac hypertrophy noted clinically. The ribs are not notched which helps to eliminate coarctation of the aorta. I have asked Dr. Keirns to interpret the pyelogram and aortogram for us at this time.

DR. MARVIN KEIRNS: I think that the most significant feature of the intravenous pyelogram is the series of films. The apparent abnormality at the junction of the pelvis and ureter on the right is, I think, one of the normal variations. It is not unusual to have variations in the take-off of the ureter congenitally without the presence of aberrant vessels or bands. The ureter may arch forward and this is seen quite frequently. The series of films shows that the kidney emptied very rapidly and has evacuated the dye fully as well as the other kidney in the 15 minute film. I cannot support the contention that hypronephrosis was present on the right side even to a mild extent. In other words, I do not feel that that particular appearance justifies the presence of a band or aberrant vessel and the fact that there was no delay in the renal pelvices and calyces emptying themselves would, I think, be against this diagnosis.

In going over the series of films of the aortogram, I felt the concentration of dye in the aorta, and especially in the peripheral vessels, was only fair. That happens sometimes, but I think it is a significant point. If one can demonstrate abnormalities in arterial studies in any location, either in an aortogram, femoral arteriogram or elsewhere, with only a fair concentration of dye, it is a significant examination. However, I do not feel that this particular series of films rules out the possibility of abnormalities in the renal arteries. One can see the peripheral portions of the renal arteries but there is a considerable segment which cannot be evaluated in both renal arteries. I do not feel that these films demonstrate an abnormality. On the other hand, there is only a fair concentration of dye in the vascular tree and an abnormality cannot be ruled out.

DR. GLADDING: The only anatomical abnormality disclosed by the autopsy which explains the hypertension consisted of a bilateral constriction or stenosis of the renal arteries. This abnormality is shown in the photographs. The constrictions were situated immediately distal to the sites of take-off of the renal arteries. The constricted area in the right renal artery had a lumen so small that a probe could not be passed

through it and the vessel could be opened longitudinally only by using a fine pair of iris scissors. The lumen of the left renal artery was occluded at the constricted area by a very recently formed thrombus which, microscopically, showed only a few small laminations and appears to have been an agonal thrombus. The thrombus is so recent that it could not have had anything to do with the causation of the hypertension and it probably formed during the patient's period of postoperative shock. I doubt that it had anything to do with the postoperative course. Beyond the stenosed regions, the renal arteries widen to a normal size. There was no hydronephrosis. Microscopically, there was no fibrous hyperplasia of the intima of the renal arteries at the constricted sites. Perhaps, the intima is very slightly thicker than would be expected but the change is minimal and is not sufficient in itself to cause an appreciable degree of narrowing of the lumina.

The cause of the hypertension, as disclosed by the postmortem findings was bilateral stenosis of the renal arteries, probably congenital in origin. We found nothing else to account for the hypertension. However, we could not examine the brain in this case and, therefore, the examination was not complete. Nevertheless, a definite lesion was found which is known to be associated with hypertension in man and similar, artifically produced lesions in animals are known to produce hypertension. In essence, this boy had bilateral Goldblatt kidneys.

At this time, it is appropriate to go back to the clinical course of the patient and examine the aortogram more closely. Originally, the aortogram was interpreted as showing no abnormalities. In the light of Dr. Keirns' interpretation of the aortogram, it would seem that the error in this case was in interpretating an inadequate aortogram as an adequate aortogram showing no abnormality. There is a concise, excellent article dealing with the subject of hypertension, aortograms and intravenous pyelograms by Poutasse and Dustan from the Cleveland Clinic. These authors mention three cases of bilateral renal artery stenosis with fibrous intimal hyperplasia in children and present an excellent reproduction of an aortogram done in one of the cases. The aortogram shows quite well the regions of constriction in the renal arteries. The point is made by these authors that errors can be made in misinterpreting adequate aortograms and in attempting to interpret inadequate aortograms.

UROLOGIST: I was not the surgeon who operated upon this patient. However, I was called in on this case as a consultant and I did have the chance to examine the films of the aortogram. I believe that they are adequate and that they show no abnormality.

DR. GLADDING: We have the films here and I wish you would examine them again at this time.

UROLOGIST: (After examination of the aortogram) I guess that I will have to retract my statement. The areas of constriction shown in the photograph of the gross specimen can be seen very poorly, at best, in the aortogram. I suppose that since these regions are poorly demonstrated, this has to be an inadequate aortogram.

DR. GLADDING: The constricted portions of the renal arteries lie over the vertebral column in the films of the aortogram. Certainly, these areas are poorly seen. The concentration of dye is not so great as it should be. However, the presence of a marked constriction, as was present in this case, would necessarily reduce the size of the column of dye going through that area and it would not show up so well in the X-ray. Therefore, it may be that this was an adequate aortogram which was misinterpreted or it may be that it was an inadequate aortogram which should not have been interpreted. Since I am not an expert in interpreting roentgengrams, I shall have to leave the decision up to each one of you. I can state only that I cannot see the renal arteries in the regions involved by the stenosis.

Poutasse and Dustan describe briefly a similar case in a 15 year old boy in whom bilateral renal arterial grafts were performed and, at the time of the report, the boy was doing nicely. I should like to ask the surgeon if he thinks he would have been able to do an arterial graft in this case had he known this condition existed. Grossly, I was not impressed with the size of the arteries until I tried to open them at

autopsy. I doubt that one could tell that these arteries were stenotic in situ unless all the extraneous tissue were stripped from the vessels.

UROLOGIST: I do not think a graft could have been done.

DR. GLADDING: That is my impression, also. I do not think that anything could have been done for this boy. The arteries involved were quite small and it would have been an exceedingly delicate operation in which there would have been a very important time element in depriving the kidneys of their blood supply. Had the diagnosis been known preoperatively, it is possible that a graft might have been successful if some type of a shunt were done to maintain the blood supply to the kidneys during the period of grafting.

The mechanism of the immediate cause of death is unknown to me. We did not have the opportunity to examine the brain so that there remains the possibility that there was some type of intracranial pathology which was responsible. With the information at hand, I can say only that I believe the cause of death was physiological and cannot be explained anatomically. An electrocardiogram might have shown that the tachycardia was or became ventricular fibrillation. An intracranial lesion might account for the hyperpyrexia but this patient was a child and children develop hyperpyrexia with much less provocation than do adults.

The biopsies obtained at operation were negative. The autopsy specimens showed no significant changes. There was some tubular degeneration in the kidneys as well as a few small foci of tubular necrosis but these changes were of very recent origin and probably resulted secondarily to the operation and postoperative shock. I do not think they were a cause of the shock. The adrenals were negative except for focal necroses around the biopsy sites. The heart was enlarged weighing 170 gm. The normal maximum for a child of this size is about 125 gm. I believe the cardiac murmur was functional. There was very minimal thickening of the mitral valve. The left ventricle seemed slightly dilated. As I mentioned previously, the thrombus in the renal artery was an agonal thrombus.

It is not necessary for the kidney to show anatomical changes when the hypertension is due to a so-called Goldblatt kidney. The renal function tests may be abnormal but they do not have to show any variations from normal. That would seem to have been the situation in this child although the intravenous pyelogram is the only function test that was used.

UROLOGIST: I was one of many urologists who saw this patient and all the urologists who saw the patient thought there was no disease in the urinary tract to cause this hypertension. It was during a pediatric seminar in this city that this case was presented to some out-of-town doctors who suggested that the patient should be explored in spite of all negative findings. I was the last urologist approached on this matter; all the rest had refused. So, in view of the fact that they were going to send the child elsewhere for exploration, I agreed to be a technician. The kidneys looked normal. They apparently had a good blood supply because, when the biopsies were taken, bleeding was profuse and controlled with some difficulty with mattress sutures and oxycell gauze. The right renal artery was exposed and thought to be of normal size. My experience as to the size of renal arteries in children is limited. The adrenals were normal. The postoperative course appeared to be normal with the exception of a tachycardia. On returning from the operating room, the patient had a pulse rate of 140. This increased rapidly. He reacted normally, drank water and looked normal with the exception of the tachycardia. At six p.m. I saw the patient and he appeared to be perfectly normal except for a tachycardia. About nine p.m. there was some bleeding into the dressing and there was a small hematoma in the wound which was easily controlled with a pack. The blood pressure was still up to 200 and the tachycardia was around 140. I was concerned about the tachycardia; however, one of the pediatricians had just seen the patient and did not think it necessary to do anything about it. Two hours later, the tachycardia was around 160 and the blood pressure around 200. Hematocrit studies and other studies showed no change. It was thought that there might have been an intra-

abdominal or retroperitoneal hemorrhage but in view of the lack of sweating, lack of pilomotor reaction, presence of warm skin and distended vessels, he was observed further. About three a.m. his temperature rose to 106 degrees and the tachycardia was around 180. Shortly afterwards, he was in extremis and expired. The next morning one of the pdiatricians said, "Well, we could have done something about the tachycardia" and another one said "I don't know; we have had children who had tachycardia at this rate for several days and nothing happened." I do not know the mechanism of death. I do not think it has been explained here. I think, perhaps, the arteries are an interesting finding and may be responsible for his hypertension. Perhaps there was something else which was not discovered by the postmortem examination. I think Dr. Orpet's explanation that there might have been a pheochromocytoma somewhere which was not discovered is still a possibility.

DR. GLADDING: It is always possible that a small pheochromocytoma could be overlooked. However, this is one of our few cases in which the pathologist was alerted to the existing problem and a careful search was made for tumors in the abdomen, thorax and neck. I did not find one and I feel safe in saying that there was no tumor. There were no bands or aberrant vessels in the vicinity of the renal arteries and ureters. I think that the explanation of the hypertension is to be found in the bilateral stenosis of the renal arteries. Certainly, this is a well documented experimental cause of hypertension and this particular abnormality, that is bilateral renal artery stenosis, has been described several times previously. So far, this lesion has always been bilateral and occurred in the first, or proximal, portions of the renal arteries. I believe that this is the cause of the hypertension in this child.

Reference: Poutasse, Eugene F. and Dustan, Harriet. *Urologic Causes of Hypertension.* Cleveland Clinic Quarterly 23; 3-15, January, 1956.

Addendum: Since editing this conference, another article appeared in the literature by Poutasse, Humphries, McCormack and Corcoran. The article is a more detailed account of the clinical and pathological findings mentioned briefly in the earlier paper by Poutasse and Dustan. It is interesting that the three patients reported had fibrous thickening of the renal artery intima at the sites of constriction. Our case did not show this change but it must be remembered that the child was only 5 years of age whereas the patients reported by Poutasse, et al, were 14, 15, and 23 years of age. It may be that our patient was too young, or had not had hypertension long enough, to have developed fibrosis of the intima. To the best of my knowledge, our patient is the youngest in which bilateral renal artery stenosis with hypertension has been reported.

Reference: Poutasse, E. F., Humphries, A. W., McCormack, L. J., and Corcoran, A. C.: Bilateral Stenosis of Renal Arteries and Hypertension, J.A.M.A. 161:419-423 (June 2), 1956.

Surgical Treatment of the Klippel-Feil Syndrome. J. Bone & Joint Surg. 38-B, 440, A. Bonola.

Congenital osseous torticollis or the Klippel-Feil syndrome, characterized by shortening of the neck, with limitation of motion of the neck, may be associated with thoracic or craniofacial asymmetry, flat back, simian deformity of the scapulae, impaired jaw movements, angular cervicothoracic scoliosis and occipital platycephaly. The treatment of this syndrome would logically be directed toward lengthening the neck, as well as increasing neck motion, and, of course, has been exceedingly difficult to accomplish surgically.

A. Bonola presents a very intriguing method which he has used on one patient, a 32 year old woman, in which he carried out a thoracoplasty, exposing and removing the first four ribs on the right and the first three ribs on the left. The ribs were not disarticulated but as much of them was removed as was readily accessible. The photographs accompanying this paper show excellent lengthening of the neck and the range of neck motion improved.

Although the author presents only one patient, his method of attack of this problem is ingenious and very probably many other patients can be benefitted by the same procedure. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

President's Letter



Dr. Wood

Chicago has been experiencing an extensive epidemic of poliomyelitis this summer. As of August 3, 546 cases had been reported, 330 of which had been in children under five years of age. Among the 330 cases under five years of age, sixty-six per cent have been paralytic cases. No information is available on the vaccination status of the Chicago cases. With our knowledge of the effectiveness of Salk vaccine, there is only one answer to the Chicago situation:—Children in Chicago had not been given the vaccine.

As of August 17, fifty-one cases of poliomyelitis had been reported in Tennessee. Twenty-nine of these cases were paralytic and twenty-two non-paralytic. Of the twenty-nine paralytic cases only three had received at least one dose of vaccine and of the twenty-two non-paralytic cases six had received vaccine.

Although this information is encouraging an examination of the figures supplied to us by the Tennessee Department of Public Health showing the percentage of children who have received at least one dose of Salk vaccine is very disappointing. Although the attack rate from poliomyelitis has been consistently highest in children under five years of age in Tennessee, as of August 1, 1956, only thirty-one per cent of these children had received at least one injection of vaccine. The percentage of eighty-three for children 5-9 years is very good. Among the ninety-five counties in the State, in only six have at least fifty per cent of the population under twenty years of age received one dose of vaccine and in only thirty-five have at least forty per cent of this age group received at least this amount of vaccine.

The medical profession has grave responsibilities in the poliomyelitis vaccination program. Let me urge every physician in this State to fulfill these responsibilities first by seeing that every child under his care receives not only poliomyelitis vaccine early in life but the other immunization agents, and second by not only publically endorsing the vaccination program but also by taking the lead in actively promoting the program. Let us fulfill our responsibilities so that Tennessee will not experience what Chicago is now experiencing.

R P Blood M.D.

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SEPTEMBER, 1956

EDITORIAL

MANAGEMENT OF HYPERTHYROIDISM

The management of hyperthyroidism has been continuously changing since psychotherapy was originally attempted many years ago. The failure of medical research to determine the etiology of this disease accounts for the many types of therapy which have been advocated. Until an etiologic agent is found we can expect shifting enthusiasm for various procedures. The future holds the key to specific attack or, better still, prevention. During the past fifty years radical surgery has been replaced by conservative surgery which has given way to medical management. This, in turn, has been superseded by radiotherapeusis. Along the way, roentgen treatment was successful in producing good results and very likely some skin cancer. It has been discarded.

Our armamentarium in the treatment of hyperthyroidism at the moment includes: iodine, antithyroid drugs, alone or in combination with other therapy, surgery, and radioactive iodine.

It is doubtful that iodine is ever the preferred drug for definite treatment of hyperthyroidism.

The antithyroid drugs block the enzyme action necessary for the synthesis of the thyroid hormone, thyroxin. These drugs of the thiourea group are highly effective, low in cost and easily administered. Unfortunately they are also associated with some toxicity and a recurrence rate higher than that following surgery.

Perry McCullagh[1] believes that antithyroid drugs are useful in the following: (1) in the preoperative preparation of patients; (2) for long-term therapy in Graves' disease, especially in a young patient or in one whose goitre is not very large; (3) for long continued use if surgery or radioactive iodine is unavailable or surgery is unsafe or unacceptable; and (4) during pregnancy, especially if used with feeding of thyroid during the last half of the gestation period.

Surgery has improved markedly during recent years, but despite this some physicians[2] do not submit more than 15 per cent of their thyrotoxic patients to the surgeon. Surgery is most clearly indicated in patients with solitary adenomas, large nodular goitres, goitres producing pressure symptoms, and cardiac disease requiring rapid control of the hyperthyroidism. Because of fear of inducing cancer or genetic changes with radioactive iodine in young people, some feel that surgery is indicated in the younger age group if antithyroid drugs have failed to produce a lasting remission. The disadvantages of surgery are obvious. The Lahey Clinic figures, which are among the best, show recurrence in 1.9 per cent, permanent myxedema in 5.2 per cent, permanent tetany in 1.8 per cent and death in 0.2 per cent. In addition, loss of time from work, discomfort and period of hospitalization should be included among the disadvantages.

Radioactive iodine has been used for about 15 years with an outstanding record in the treatment of diffuse goitre. Although cancer

[1]McCullagh, E. Perry: On the Choice of Treatment for Hyperthyroidism, Ann. Int. Med. 44:292, 1956.

[2]Williams, Robert H.: Textbook of Endocrinology, Philadelphia, W. B. Saunders Co., 1955.

induction and genetic disturbance have been feared, up to the present these are not supported by fact. Radioactive iodine is most clearly indicated in postoperative or antithyroid recurrence, diffuse goitre in patients over 40 years of age and various disabilities which make the patient a poor surgical risk.

Radioactive iodine therapy has no mortality, control is almost 100 per cent complete and recurrences, although rare, can be safely and effectively treated. Except for the rare occurrence of myxedema with the newer schedules of dosage, the disadvantages of surgery are absent.

Medicine has come a long way in the management of hyperthyroidism. Lest we feel the answer has been found, Morgans and Trotter's[3] recent use of potassium perchlorate in the treatment of this disorder tells us that medical science is still striving for a better therapeutic tool.

A. B. S.

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POINT VALUES AS A BASIS FOR FEE SCHEDULES

One of the criticisms commonly and justifiably directed at fee schedules incorporated in medical insurance policies is that they are frequently unrealistic in the fees set for certain procedures or operations as compared to others done by physicians or surgeons. The inequities which result from such fee schedules have led to much dissatisfaction in the profession.

This problem was met in the State of California by a committee of its state association and after 3 years' work has been accepted in that state.* This committee studied the fees charged by 4,700 members of its association for each of the categories utilized in their new system. On this basis the committee established point values for a procedure of service rather than dollar values. Having established the dollar value of a point, and knowing the point value of a procedure, it is simple to set a fee in dollars in any individual case.

The point scales were set up not only for surgery, but also in the fields of medicine, radiology and pathology. It was necessary to derive point values in each of these branches since it would be difficult or impossible to relate the relative values of a hospital visit for a pediatric or medical patient to an appendectomy, for example, or to an X-ray examination of a wrist, or to an Rh determination.

The California Committee, from its large background of experience with the fees of 4,700 doctors could, in that state, arrive at a median fee for some items, as a house call or an appendectomy, and using it as a starting point set points for these items and then relate all of the services by physicians on a comparative basis. Having derived these point schedules the Committee found what was suspected, that some fee schedules in insurance plans paid more than the going rates for some operations and much less than the usual rate for others.

The big question of course is, will insurance companies accept such rationally based fee schedules. It seems probable that they will since they have been as much in the dark in setting their fee schedules as are many doctors when faced with the same problem. Anyone who worked on the fee schedule for the Tennessee Plan will attest to the difficulties of getting together a fee schedule in dollar values without some sort of yardstick. This new approach would have simplified the process by setting an acceptable fee schedule and then cut it proportionately to fit the income bracket to which the Tennessee Plan is directed. It seems insurance companies should welcome some rational approach to fee schedules, that is satisfying to the profession.

For the doctor, a point value yardstick makes it easier to judge relative values if he wishes to increase or decrease his fees in the individual case because of the patient's economic situation. He can more easily arrive at proportionate charges if he practices in a rural area where, with less overhead expense, he may wish to charge less than his urban brothers. Fees may become more equalized as between doctors and eliminate some of the complaints which are brought to grievance committees. Physi-

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[3]Morgans, M. E., and Trotter, W. R.: Treatment of Thyrotoxicosis with Potassium Perchlorate, Lancetl:749, 1954.

*Owens, Arthur:—Value Scale Spurs Insurance Pay, Medical Economics 33:129, (July) 1956.

cians newly entering practice are provided with a yardstick which may aid them in avoiding the risks of charging either too little or too much.

This approach to fee schedules is to find use in preparing them for insurance purposes, for the Medicare plan, and in other dealings with third party contracts. Obviously, there can be no nationwide yardstick for a number of local factors will influence the schedule. It is a scheme which can be clearly related to geographic subdivisions only.

R. H. K.

DEATHS

Dr. Sam T. Ross, 66, Nashville, died on July 23 at Baptist Hospital in Nashville.

Dr. A. J. Guinn, 66, Ducktown, died on August 12 at Georgia Baptist Hospital in Atlanta.

Dr. Seymour G. Pelzer, 44, Bristol, died on July 27 at his residence.

Dr. Robert Lee Maloney, 81, McMinnville, died on July 8 at his home.

Dr. John P. Lamb, 80, Elizabethton, died on July 23 in St. Elizabeth Hospital.

Dr. Fred B. Stapp, 95, Chattanooga, died on August 4 in a Chattanooga Hospital.

Dr. Samuel S. Thurman, 73, Dayton, died on July 29 in a local hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

At the meeting on July 26 the Society had an outstanding guest speaker, Dr. Robert Greenblatt, Professor of Endocrinology, Medical College of Georgia, Augusta, who spoke on "Endocrinogical Disorders."

Eight County Medical Society

The regular monthly meeting of the Eight County Medical Society was held in Livingston on July 20 with thirty doctors attending. Subjects of vital interest in the medical world were the main topic of discussion. Among visiting doctors were Dr. Thomas Frist, Dr. Joe Capps and Dr. Robert Sadler. The Society will meet again in September at Gainesboro.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met in regular session in the auditorium of the Institute of Pathology on June 5, 1956.

A number of announcements and new business was presented to the Society. The scientific program consisted of the following: "Newer Techniques for Angiography" by Dr. R. L. DeSaussure. The discussion was led by Drs. J. E. Whiteleather and C. D. Hawkes "Massive Prolapse of the Rectum" was the subject presented by Dr. Morton J. Tendler. This discussion was led by Drs. W. Edward French and L. Henning Mayfield.

At the meeting on July 3 the program consisted, first of a Panel Discussion by St. Jude's Hospital Steering Committee, with Dr. Ralph Rychener, Moderator. Others participating were: Messrs. Edward Barry, W. W. Scott, J. F. Canale, Paul Molloy, Fred Gattas and Nat Buring, and Commissioner John T. Dwyer; and, second, The Current Status of the Poliomyelitis Problem, by Dr. L. M. Graves.

Dependents Medical Care Act

Representatives of the Tennessee State Medical Association met on July 28-29 in Chicago with representatives of the Department of Defense and the A.M.A. to discuss regulations now being drafted to cover the Dependent Medical Care Program. An explanatory editorial appeared on page 290 of the August issue of the JOURNAL, outlining many of the pertinent points of this new law. The proposal by the Department of Defense would set up a home town care program for those dependents eligible for service in private facilities.

Private practitioners and civilian hospitals agreeing to participate in the program must render care on a full-service basis—which is to say that fees provided shall constitute full payment for services. But the Defense Department has stated that (1) fees paid private physicians shall be locally prevailing, usual fees, (2) doctors will have a definite say so in selecting their fiscal agent to handle this program and the paper work of issuing payments, (3) disputes arising out of the administration of the Dependents Medical Care Act will be arbitrated by committees of doctors, (4) agreements concluded with doctors through their national fiscal agent may be reviewed annually.

From the Executive Secretary

ORGANIZATIONAL NEWS

Special Meeting of House of Delegates September 22nd

● Notice has gone to all members of the House of Delegates of the Tennessee State Medical Association concerning a called meeting of the House in Nashville at the Andrew Jackson Hotel on Saturday morning, September 22nd to discuss and adopt a policy relative to Public Law 569, "Dependents Medical Care Act." This law provides a program of medical care for members of the Uniformed Services and their dependents and includes Army, Navy, Air Force, Marine Corps, Coast Guard and the Commissioned Corps of the Coast and Geodetic survey of the Public Health Service. The Law applies to dependents of anyone on active duty and to those who have been retired; "dependents" as spelled out in the act are the usually accepted categories. The Law becomes effective on December 8.

Points to be Determined

● 1. One of the points to be determined by the House of Delegates is the selection of a fiscal agent who will pay the doctor his fee on a local level and will in turn be reimbursed by the Defense Department.

2. The second duty imposed upon the State Association will be the setting up and adopting of a "reasonable" fee schedule.

National Meeting Attended by TSMA Officers

● On July 28 and 29, officers and members of the Board of Trustees of the TSMA attended a meeting in Chicago of all the state and territorial medical associations concerning this matter. The consensus of the opinion of the representatives of the states attending the meetings was that the medical profession should cooperate with the Defense Department in the implementation of the Act. (Please refer to August issue of the Journal, Page 290, for an editorial on "Dependents Medical Care Act.")

1,112,462 People Now Covered Under Tennessee Plan

● As of June 30, 1956, the thirty-eight underwriters of the Tennessee Plan reported that 378,388 employees and 734,074 dependents, making a total of 1,112,462 Tennesseans covered under the Tennessee Plan, were receiving benefits as insureds. This represents an increase of 214,000 persons since June 30, 1955. These figures approach a large segment of the total population of the State of Tennessee. A considerable amount of doctors income is realized from this very large group of insured persons in the State.

Medicine Loses Long Fight to Defeat Disability Benefit, Social Security

● You probably have already read in your local newspaper that organized medicine was unsuccessful in its long fight to defeat the disability benefit amendment to the Social Security Law in the Senate. The vote was very close, 47 to 45. (Senators Kefauver and Gore voted against the medical profession.) A change of one vote would have meant victory.

Other Provisions Adopted Under H.R. 7225

● Other provisions adopted under H.R. 7225 are:

(1) Permiting women to collect Social Security at age 62 instead of age 65.

(2) Compulsory inclusion of 200,000 self-employed professional workers, and

(3) Survivors' benefits for disabled children regardless of age.

SOCIAL SECURITY TAX was increased from 2% on both employees and employers to 2¼% on pay up to $4,200 a year. SOCIAL SECURITY TAX for the self-employed person was increased from 3% to 3⅜%.

Specifically for physicians, the provision of CASH DISABILITY PAYMENTS is the longest step ever taken to "Socialize" medicine.

State and County Officers Urged to Attend Conference On September 23rd In Nashville

● Officers and Committee Chairmen of the Tennessee State Medical Association and all officers of county medical societies are urged to attend the first County Medical Society Officers Conference in Nashville at the Andrew Jackson Hotel on September 23rd. Much information has appeared in previous issues of the Journal and a letter and program have gone to the respective officers of the state and county medical organizations. Any interested member of the Tennessee State Medical Association that desires to attend this conference is urged to be present and is welcome to attend.

New Internal Revenue Regulation

● The U. S. Internal Revenue Service has recently issued a regulation which is important to all physicians. Efforts over a long period of time by the AMA to get the Internal Revenue Service to issue a regulation permitting physicians to deduct their expenditures in taking postgraduate "refresher" courses have finally paid off.

The regulation effective August 9, provides that expenditures for education are deductible if they are for a refresher or similar type of course taken to maintain the skills directly and immediately required by the physician. An educational course to be covered should be designed for established medical practitioners to help them keep abreast of current developments in the profession; it should be of short duration; it should not be taken on a continuing basis, and should not carry academic credit. Education designed to prepare the practitioner to enter a specialty will not be acceptable.

When a physician travels away from home primarily to obtain "refresher" education, his expenditures for travel, meals, and lodging while away from home are deductible. Personal expenses for recreation or other items will not be allowed.

AMA House of Delegates Roundup

● The House of Delegates of the AMA approved the report of the Committee to Review the Functions of the Joint Commission on Accreditation of Hospitals. The reports contained 17 conclusions which included the following:

1. Accreditation of hospitals should be continued.
2. Physicians should be on the administrative bodies of hospitals.
3. General practice sections in hospitals should be encouraged.
4. Staff meetings required by the Joint Commission are acceptable, but attendance requirements should be set up locally and not by the Commission.
5. The Joint Commission should not concern itself with the number of hospital staffs to which a physician may belong.
6. The Joint Commission is not and should not be punitive.

Private Practice by Medical School Faculty Members

● Another major action by the House involved the problem of private practice of medical school faculty members, which has been under study by the Committee on Medical and Related

(Continued on page 333)

Public Service

THE TENNESSEE TEN

Indigent Hospital Program Faces Test

● Tennessee's Indigent Hospital Service program faces a crucial test next January when the State Legislature convenes. It will have been four years since the act which set up the program was passed.

During the three years that the program has been active the people of Tennessee have had ample opportunity to see that the plan is humane, practical, and necessary. It will be up to the people to decide whether the pilot funds amounting to only $150,000 per year at present, will be expanded with a new appropriation large enough to bring real relief to our indigent sick.

By the time this is published representatives of a study committee composed of this Association, the Tennessee Chapter of American Cancer Society, the County Judges Association, Tennessee Heart Association and Tennessee Hospital Association will have reported to the final session of the Tennessee Legislative Council, whose responsibility it is to conduct investigations on public needs such as this and make recommendations to the Tennessee Legislature.

A report on the need for increased appropriations before the Legislative Council is necessary in order to present the findings of the Study Committee and allow members of the Council to ask questions. The five organizations sponsoring the increased appropriation have nothing to hide. Their only concern is to bring the facts before the citizens of Tennessee and their elected representatives.

The facts are these: 1. Tennessee's Indigent Hospital Service program is the first such plan to be established whereby all appropriated funds are controlled locally by a representative and responsible committee in each county.

2. After three years of operation it has been shown that county screening committees use funds wisely, exercising a genuine concern for the way tax dollars are spent. Only the truly indigent receive the benefit of this plan.

3. Tennessee had the first plan under which physicians agreed to treat without charge indigent patients hospitalized under a county-state program. This brought a humanitarian necessity within reach of the taxpayer's budget. It insures that all money put in the program goes to make sure indigent patients get the best hospital care available.

4. The annual cost of hospitalizing Tennessee's indigent patients has risen from approximately $1,600,000 in 1951 when the last survey was made to a figure well over two million dollars. This means that even during the three years the plan has been in effect Tennessee hospitals have gone in the red over five million dollars.

Two resolutions passed by the Tennessee Hospital Association at its annual meeting June 16th typify the sort of cooperation which TSMA is receiving in its effort to get an adequate appropriation for this program.

The first resolution fully endorses the proposed increase in the appropriation. The second resolution is reprinted here.

Hospital Association Supports Program

RESOLUTION

● WHEREAS, the availability of hospital care for all Tennesseans whose health can be materially improved by treatment by a physician in a hospital is essential to the general welfare,
WHEREAS, the physicians in the State of Tennessee have agreed not to charge for treatment of indigent patients in acceptable hospitals, if payment for hospital care of indigent patients is provided,
WHEREAS, the Tennessee State Medical Association was responsible for the passage of a law by the Tennessee Legislature, providing for payment of hospitalization of Indigent patient to hospitals from state and county funds on a matching base,
WHEREAS, the Tennessee Indigent Hospitalization Program is recognized as a practical approach of this problem throughout the Nation and now used by other States as a model,
WHEREAS, the institutional members of the Tennessee Hospital Association are deeply grateful for the efforts of the Tennessee State Medical Association to solve one of the greatest problems facing hospitals in Tennessee,
BE IT THEREFORE RESOLVED, that the members of the Tennessee Hospital Association wish to express their sincere appreciation to the Public Service Committee of the Tennessee State Medical Association and its Chairman, L. W. Edwards, M.D., for their significant contribution and their continued efforts to expand the Tennessee Indigent Hospitalization Program.

Auxiliary Health Project Contest

● National attention was focused on the TSMA Medical Auxiliary's Health Project Contest by an article which appeared in SCOPE WEEKLY for June 14. Copies of the issue containing the article can be obtained from this office while they last, by sending a post card with your name and address to CONTEST, 112 Louise Ave., Nashville.

Medical School PR

● Medical school public relations have become a topic of interest to the medical profession as the increased need of the schools for money has become more and more apparent.

One of the more challenging proposals for financing medical schools has come from Brian Bird in his article, "The Financing of Medical Schools," which appeared in the June, 1954, issue of The Journal of Medical Education.

What this article proposes is that each medical student pay the actual cost of his medical education, instead of paying only that part represented by his tuition. It is suggested that the student could pay his regular tuition and then sign notes for the remainder of the cost of his medical education. This debt could then be paid off over a period of ten or fifteen years, after the physician has been established in practice.

It is argued that such a system would not deter students from taking up the study of medicine. Such a plan would place medical school finances on a sound footing and would allow the schools to pay faculty members in a manner commensurate with their worth.

From the public's viewpoint such a practice would do much toward reinforcing the concept of the American physician as a hardy individualist, nurtured under the free-enterprise system.

The great danger, of course, is that medical schools will be forced, more and more, to depend on government largess for their existence, and thus fall heir to government control.

In brief, private medicine may provide dependents' spouses and children of service personnel with, (1) treatment of acute medical and surgical conditions, (2) treatment of contagious diseases, (3) complete obstetrical and maternity care, (4) hospitalization in semi-private rooms up to 365 days, (5) professional service prior and subsequent to hospitalization for bodily injury and surgery, and (6) diagnostic tests and procedures including laboratory work and X-ray instant to hospitalization.

NATIONAL NEWS

The Month in Washington

In terms of actual health bills passed and sums of money appropriated, the 84th Congress which ended just a few weeks in advance of party presidential conventions undoubtedly set some records. Measures ranged from the far-reaching program of disability cash payments to a bill for the commissioning of male nurses in the armed services.

In between are a wide variety of measures which, in the opinion of Secretary Folsom, Secretary of Health, Education, and Welfare, gives "promise of immediate and substantial progress on a wide front in the improvement of the nation's health."

Both Mr. Folsom and the President deplored the fact that Congress had not acted on their plan for federal aid to medical schools, but Congress decided this was one of the subjects that needed more study before taking any further action. In addition Mr. Folsom expressed disappointment that nothing had been done on authority for pooling arrangements among small health insurance companies and the long-dormant plan for a health reinsurance fund.

On medical research funds, the administration this session asked for the largest amount of money ever requested in one year. The appropriation finally voted was even larger, some $170 million. On top of this, Congress in its final hours appropriated nearly $80 million to carry out new legislation just passed.

Here are the highlights of major health bills approved by the 84th Congress: Social Security Amendments—Changes in the 21-year-old social security law now include (1) Old Age and Survivors Insurance Payments to disabled workers at age 50, paid from a "separate" fund, (2) extension of social security to some 250,000 dentists, lawyers, osteopaths and other self-employed persons, (3) lowering of retirement age for social security purposes for women from 65 to 62, (4) earmarked payments for medical care of public assistance recipients, and (5) increase of payroll deductions by one-half of 1% and three-eights of 1% for the self-employed.

Laboratory Research Facilities—The Hill-Bridges bill for $90 million in construction grants over three years to public and non-profit institutions to erect research facilities started out in the Senate as a bill to aid research in crippling and killing diseases but wound up for research in all "sciences related to health."

Health Amendments Act—The so-called little omnibus health bill provides for federal grants for training of public health specialists, professional nurses qualified for teaching and administrative jobs and for practical nurses—plus a two-year extension beyond next July 1 of the 10-year-old Hill-Burton hospital program, and special projects grants for mental health studies and demonstrations.

Medical Care for Military Dependents—A long-sought goal of the Defense Department was enactment of a permanent program of medical care for dependents of armed services personnel either in military hospitals and clinics or through private sources. It is scheduled to begin early in December.

National Library of Medicine—Another proposal long in the making was the re-establishment of the Armed Forces Medical Library as the National Library of Medicine. For administrative purposes, Congress put it under the Department of HEW, but left up to the 17 man board of regents the selection of site—in all likelihood in the Washington area.

Sickness Survey—Special and continuing surveys on the extent of illness and disability in the U. S., along with medical care being offered have been authorized—the first detailed study of its kind in over 20 years. The work will be done by the Public Health Service.

Water Pollution Control—The PHS is authorized to make grants to states and communities to help in construction of sewage disposal plants, at the rate of $50 million a year for 10 years.

Some other measures signed into law by the President were: establishment of a mental health program for Alaska, budget increases for additional staff for the Food and Drug Administration along with a new headquarters building for modern laboratories, provision of medical care for employees and dependents of the State Department abroad in U. S. military facilities, a $400,000 fund to finance the holding of the World Health Assembly in this country in 1958 (which is the 10th anniversary of the founding of the World Health Organization) and the commissioning in the armed services of osteopaths.

Tennessee Senators Vote for Disability Amendments in H.R. 7225

Tennessee physicians, along with the AMA have vigorously resisted the passage of the Amendment to H.R. 7225 which provides permanent disability at 50. Because the doctors will make the determinations the added cost cannot be estimated; and the enactment will torpedo the expensive and

effective rehabilitation programs. Both Senators Kefauver and Gore voted against the physicians and the Amendment passed 47 to 45. Had either Tennessee Senator voted with medicine, the Amendment would have been lost.

MEDICAL NEWS IN TENNESSEE

Tennessee Department of Public Health

The Public Health Department of the State of Tennessee has requested that the following information be made known to all doctors in the State.

"In order to conform to the method of reporting serodiagnostic tests for syphilis as recommended by the National Serology Advisory Council, the state shall in the future report those sera which give a negative VDRL test as "nonreactive" rather than "negative" as they are now reported by the state laboratory.

R. H. Hutcheson, M.D., Commissioner

Plateau Medical Assembly

The Plateau Medical Assembly was conducted in the Scott County Hospital at Oneida, on August 15. Guests and visitors were introduced by Dr. Milford Thompson, Chief of Staff of Scott County Hospital. The program was as follows:

Afternoon Session

B. M. Overholt, M.D., Presiding—Cardiologist—Scott County Hospital

Diagnosis and Management of Rheumatic Fever—R. B. Wood, M.D.

Evaluation and Selection of Rheumatic Carditis Patients for Surgical Treatment—Frank London, M.D.

Adjourned to Cooper's Lake for Evening Session Social Hour and Picnic

Evening Session

B. M. Overholt, M.D., Presiding

Rehabilitation and work classification of the Rheumatic carditis patient—J. E. Acker, Jr., M.D.

Question and Answer Period. Milford Thompson, M.D., Presiding.

Doctors, Overholt, Wood, Acker and London.

A.M.A. President to Speak

Dr. Dwight H. Murray, president of the American Medical Association will head a list of speakers for the 1956 Tennessee Valley Medical Assembly in Chattanooga on October 1 and 2. The many other speakers and their subjects were announced in the August issue of the Journal.

New Hospital Has 14 Laboratories

A total of 14 laboratories occupying 12,000 square feet of space mark the most obvious difference between the new University of Tennessee Memorial Research Center and Hospital and other modern general hospitals. These facilities in addition to another 8,000 square feet of clinical laboratory space, put the "research" into the name of the building which will be U. T.'s largest, with 245,000 square feet of floor space.

Scientists and doctors concerned with isotopic research will look on the center as the meeting place of patient and science.

Present capacity of the hospital is 384 beds plus 58 basinets. To staff and operate the facility, there will be a statistical shade less than two employees per patient.

University of Tennessee College of Medicine

A grant of $50,000 has been made to conduct research and demonstrations in the field of hospital service and administration. The funds will be used to demonstrate how a coordinated hospital plan for the state can be developed using the 21 counties of West Tennessee as a demonstration area.

★

A grant of $9,720 has been made by the Institute of Arthritis and Metabolic Diseases of the U. S. Public Health Service to establish a special training program in the field of rheumatology, in the Department of Medicine.

★

Dr. Robert C. Rendtorff, of the Department of Preventive Medicine, has received a $33,623 three-year grant from the National Institute of Allergy and Infectious Diseases of the U. S. Public Health Service for the study of virus and parasite relationships.

★

Dr. Nicholas DiLuzio, of the Department of Physiology, has been awarded grants to support his studies on the harmful effects of exposure to radiation and invstigations of fat metabolism,—$20,512 by the National Heart Institute of the U. S. Public Health Service, $6,700 by the Atomic Energy Commission and $1,500 by the Memphis Heart Association.

★

Dr. Edward H. Storer, of the Department of Surgery, has been awarded a $10,350

grant by the National Cancer Institute of the U. S. Public Health Service.

★

Dr. J. P. Quigley, of the Division of Physiology, has been appointed by the Surgeon General, to the Selection Committee for the Senior Research Fellowships granted by the National Institutes of Health.

★

Dates for nine postgraduate programs to be offered by the University of Tennessee College of Medicine during the fiscal year ending next June 30 have been announced by the Postgraduate Department.

Courses will be given in Obstetrics and Gynecology on October 3, 4 and 5; in Clinical Electrocardiography, October 17, 18 and 19; in Radiology, November 14, 15 and 16; in Psychiatric Problems in General Practice, January 16, 17 and 18; Office Urology, February 27, 28 and March 1; Pediatrics, March 27, 28 and 29; Fractures and Dislocations, April 24, 25 and 26; Selected Problems in Internal Medicine, May 22, 23 and 24; and Surgical Management of Acute Injuries, July 24, 25 and 26.

In addition, five-day diversified courses will be offered by the College's Division of Pediatrics and Radiology. The programs will include ward rounds with the staff, discussion of cases, attendance at clinical conferences and work in the out-patient department. These courses are scheduled for the following dates: Pediatrics, January 21 through 25, 1957, and Department of Radiology, March 11 through 15.

Vanderbilt University School of Medicine

Mrs. Eileen R. Cunningham, Librarian of the School of Medicine has been retired after 31 years of service. Miss Eleanor G. Steinke, Assistant Librarian since 1946, succeeds her.

★

Development of an iron lung which will automatically adjust itself to a patient's needs will be supported at Vanderbilt University by a grant. The National Foundation for Infantile Paralysis has granted $8,617.00 to Dr. Randolph Batson of the Department of Pediatrics for research towards creation of the mechanical respirator.

★

Dr. Amos Christie has announced an all day postgraduate seminar to be held on November 1. All physicians are welcome to attend.

PERSONAL NEWS

Dr. R. G. Hewgley, Englewood, has opened the Englewood Medical Center for the practice of medicine.

Dr. Hearn G. Bradley, Nashville, was a recent delegate to the International Congress of Pediatrics in Copenhagen, Denmark.

Dr. Frank S. Brannen, Chattanooga, spoke on "Anesthesiology" at the Brainerd Kiwanis Club.

Dr. Bruce Mongle, Bristol, recently received a certificate of merit from Tennessee Selective Service.

Dr. Edward Johnson, Chattanooga, has been named Chairman of the 1956 Tennessee Valley Medical Assembly. **Dr. George K. Henshall, Jr.,** Chattanooga, has been named Co-Chairman.

Dr. Gilbert M. Roberts, Jr., Chattanooga, has been named medical consultant for the Tennessee Hospital Service Association.

Dr. Cecil B. Howard, Maryville, has announced the opening of his office for the practice of medicine in the Doctors Building.

Dr. R. B. Wood and **Dr. B. M. Overholt,** Knoxville, have been appointed to a committee to advise the administrative staff on operation of the UT Memorial Hospital and Research Center.

Dr. John Smoot and **Dr. John Moore,** Knoxville, were recent participants in a television program discussing sunburn and heatstroke.

Dr. J. H. Gammon, Knoxville, is running for re-election as direct senator in the Tennessee General Assembly.

Dr. J. E. Aeker, Jr., Knoxville, has been named President of the East Tennessee Heart Association. **Dr. B. M. Overholt,** Knoxville, became President-Elect and **Dr. E. P. Muncy,** Jefferson City, Second Vice-President.

Dr. Bruce H. Sisler, Gatlinburg, has taken office as District Governor of Rotary International.

Dr. Robert Clayton Webster, Gallatin, announces his association with **Dr. Walter H. Stephenson** and **Dr. John B. Wallace,** in the practice of medicine.

Dr. Stewart Lewis Nunn, Ripley, recently addressed the Ripley Rotary Club.

Dr. Jack T. Farrar, Tullahoma, is a candidate for re-election as Mayor.

Dr. R. S. Cowles, Jr. and **Dr. V. R. Bottomley,** Greeneville, received citations from the Tennessee Selective Service System.

Dr. Roy M. Lanier, Brownsville, is a candidate for direct representative from Haywood County in the next General Assembly of Tennessee.

Dr. Maurice Lowry, Lexington, has announced the opening of his office for the practice of medicine.

Dr. Alexander Hollaender, Oak Ridge, has been

named Chairman of a committee of the World Health Organization.

Dr. J. Westley Osborne, Hendersonville, announces the opening of his office for the practice of medicine.

Dr. W. N. Cook, Columbia, recently addressed the Rotary Club.

Dr. Lewis W. Moore, Chattanooga, has begun practice in Eye, Ear, Nose and Throat with Hogshead-Alper Hospital.

Dr. Joseph B. Drueke, Dayton, has announced the opening of his office for the practice of medicine.

Dr. Samuel S. Binder, Chattanooga, has announced the opening of his office for the practice of obstetrics and gynecology in Chattanooga.

Dr. C. S. Gelbert, Tazewell, announces that he has opened an office for the practice of medicine in Maynardville.

Dr. David Waterman, Knoxville, has been invited to lecture before the Queensland Australia Thoracic Society.

Dr. Robert DePersio, Oak Ridge, was a recent lecturer before the First Methodist Church.

Dr. F. T. Rutherford, Jr., Carthage, has announced the opening of his office for the practice of medicine in the Sloan Clinic.

Drs. R. G. Agee, J. H. Hite, Jr. and **K. M. Kressenberg,** Pulaski, have opened their new offices in a clinic located on Cedar Lane.

Dr. Kenneth G. Ross, Paris, is now associated with the Paris Clinic.

Dr. Billy Marks Hightower, Lebanon, has joined the staff of the McFarland Hospital.

Dr. William Raymond Jernigan, Springfield, will be associated with **Dr. Robert Steckler** in general practice and surgery.

Dr. Joseph Johnson, Jr., Chattanooga, recently addressed the Kiwanis Club on the Problem of Mental Illness.

Dr. Royce L. Holsey, Elizabethton, recently addressed the Tennessee Association of Rescue Squads.

Dr. William C. Grigsby, Bristol, has announced the opening of his office where his practice will include obstetrics and gynecology.

Dr. G. K. Terrell, Chattanooga, has announced the opening of his office for the practice of surgery.

Dr. George E. Murray, Knoxville, announces the opening of his new office on Cumberland Avenue with practice limited to Urology.

Dr. Lee W. Stewart has joined Doctors Harry T. Moore, Jr., John A. Jarrell, Jr., Preston H. Bandy and Marion L. Smith, Nashville, in the practice of anesthesiology.

Dr. Joseph H. Brock has joined Dr. Ernest G. Kelly of Memphis in the practice of general surgery.

Dr. Abram C. Shmerling, Nashville, has announced the opening of his office in the Doctors Building.

Dr. James P. Worden, Knoxville, has announced the opening of his office for the practice of internal medicine.

Dr. Joe M. Capps has opened his office in the Medical Arts Building, Nashville, for the practice of neurological surgery.

Dr. Robert N. Sadler, Nashville, announced the opening of his office in the Medical Arts Building, for the practice of general and thoracic surgery.

Dr. William H. Roberts has joined the Jackson Clinic of Jackson in the practice of ophthalmology.

Dr. Charles B. Thorne has announced his association with Dr. Harrison J. Shull, of Nashville in the practice of internal medicine.

Dr. Gilbert A. Rannick has become associated with Dr. Carroll H. Long, of Johnson City, in the practice of general surgery.

Dr. Arnold Haber, Jr., has become associated with Dr. Eugene M. Regen, of Nashville, in the practice of orthopedic surgery.

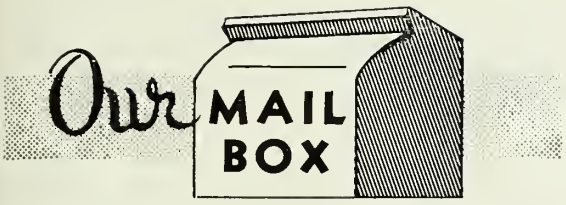
BOOK REVIEW

Histamine. Ciba Foundation Symposium jointly with the Physiological Society and The British Pharmacological Society. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. 460 pages, 133 illustrations. Boston, Little, Brown and Company, 1956. Price: $9.00.

This volume is one of the finest collections of papers on the subject of histamine available in the modern literature. This volume is composed of some 44 papers on various areas of histamine research and is divided into two sections. The first section covers a symposium of the Physiological and Pharmacological Societies held at the Wellcome Foundation. Part 1 covers the occurrence of histamine in the body; part 2—the release of histamine; part 3—the origin and significance of histamine in the body. The second section covers a symposium held at the Ciba Foundation, and includes two general topics: part 1—the origin and fate of histamine in the body; and part 2—the location of histamine in the body and the mechanism of histamine release.

It is not possible to review in any detail the contents of an exhaustive monograph of this nature. However, it will be of value to pharmacologists, physiologists, and clinicians who are interested in this fascinating subject. The real merit of the book lies not so much in the papers presented as in the extensive spirited discussions which follow each paper. These discussions have been carefully recorded and edited and are an invaluable addition to the more formal papers. Although the individual papers are rather brief, most authors have included an excellent bibliography for the use of the reader who wishes to explore the more remote aspects of a particular subject in greater detail.

ALLAN BASS, M.D.



To the Editor:

I have always been interested in the preparation a man gets to be a doctor and I believe that every physician has a legitimate right to express his opinion as to the teaching of medical students. I believe that on the faculty of every medical school there should be competent general practitioners. These practitioners would have different viewpoints and different experiences from the specialists and teaching by these men would be of great value in preparing boys to be doctors whether they eventually become specialists or general practitioners.

I would like to see some ideas expressed on this subject if you find it possible to publish this letter in the State Medical Journal.

Sincerely yours,
ADOLPHUS BRAY, M.D.
Franklin, Tenn.

August 13, 1956.

ANNOUNCEMENTS

American Board of Obstetrics and Gynecology, Inc.

The next scheduled examination (Part I), written, and review of case histories for all candidates will be held on February 1, 1957. Candidates must submit case reports to the office of the Secretary within 30 days of being notified of their eligibility to Part I. Request for re-examination in Part II must be received prior to February 1, 1957. Current bulletins may be obtained by writing Robert L. Faulkner, M.D., Secretary, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

The Academy of Psychosomatic Medicine

The Academy will hold its Third Annual Meeting at the Hotel Plaza, New York City on October 4-6, 1956. Each morning will be given over to invited speakers that will offer outstanding subjects. In addition to the invited speakers appearing in the afternoon programs, there will be a panel discussion concerned with Psychosomatic Aspects of Obesity, General Practice and Allergic Disease. There will be a total of 54 speakers. The meeting is open to all Fellows, Associate Fellows, their guests, and interested physicians. There is no registration fee.

Southeastern States Cancer Seminar

The Seminar will be held in the George Washington Hotel at Jacksonville, Florida, on November 7 and 8. The meeting is under the auspices of the Florida Division of the American Cancer Society, Florida State Board of Health and the Graduate School of Medicine of the University of Florida.

The program will cover a wide range of subjects pertaining to malignancy, diagnosis and treatment. There will be no registration fee. For further information, write P. O. Box 4545, Jacksonville 1, Florida.

Southern Medical Association Golden Anniversary

The Southern Medical Association will celebrate its Golden Anniversary with a special program at the Read House, Chattanooga, on October 2 and 3. A group of physicians from Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee met at the Read House in Chattanooga on October 2-3, 1906, and organized the Southern Medical Association.

Physicians who are members of the County and State Medical Association are most cordially invited to come to this Golden Anniversary celebration, the celebrating of the fifty years that the Southern Medical Association has been a great force in the advancing of scientific medicine in the South.

(Continued from yellow section)

Facilities of the Council on Medical Service. A Council report was adopted which stated "that it shall be the policy of the American Medical Association that funds received from the private practice of medicine by salaried members of the clinical faculty of the medical school or hospital should not accrue to the general budget of the institution and that the initial disposition of fees for medical service from paying patients should be under the direct control of the doctor or doctors rendering the service." It was also recommended that adequate liaison be developed and maintained between each component medical society and any medical school, or schools, in its area.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Department, 112 Louise Ave., Nashville 5, Tenn.

Locations Wanted

A 28 year old single physician, Catholic. University of Tennessee graduate. Desires general practice in community over 5,000. Available now. LW-207

◆

A 33 year old married physician, Episcopal. Graduate University of Maryland. Now interning in General Surgery. Priority IV. Available now. LW-208

◆

A 29 year old married physician, Methodist. Graduate University of Louisville. Now interning. Desires general practice, assistant or associate. Available now. LW-227

◆

A 28 year old married physician, Catholic, desires hospital in which to continue residency in GYN.-OB. Member Hondurian Medical Association. Available now. LW-228

◆

A 27 year old married physician. Graduate University of Maryland. Now interning. Desires general practice, clinical, assistant or associate. Available now. LW-229

◆

A 36 year old married physician, Protestant. Graduate George Washington University. Taken Part I American Board of Surgery. Desires general practice with surgery, clinic, assistant, associate or industrial in community 3,000 to 300,000. Available now. LW-230

◆

A 37 year old married physician, Lutheran. Graduate University of Tennessee. Now interning. Desires general practice in any sized community in Middle Tennessee. Available now. LW-231

◆

A 34 year old married physician, Presbyterian. Graduate University of Tennessee. Board eligible in Surgery. Desires general practice with surgery. Available now. LW-233

◆

A 29 year old married physician, Baptist. Graduate Medical College of Virginia. Three years residency in Internal Medicine. Desires practice in any sized community in Internal Medicine. Available now. LW-234

◆

A 33 year old married physician, Methodist. Graduate Duke University. Board eligible in Surgery. Desires surgical practice, clinical, assistant or associate. Available now. LW-236

A 31 year old single physician, Protestant. Graduate University of Virginia. Board eligible in Surgery in September. Priority IV. Desires surgical practice in community 15,000-50,000 in West Tennessee. Available Fall, 1956. LW-237

◆

A 33 year old married physician, Catholic. Graduate Tulane University. Priority IV. In fourth year of surgical residency. Board eligible. Desires surgical practice, clinic, assistant or associate. Available now. LW-238

◆

A 32 year old married physician, Catholic. Graduate State University of New York. Now completing third year of residency in Internal Medicine. Priority IV. Desires clinic, assistant or associate practice in Internal Medicine. Available February, 1957. LW-239

◆

A 26 year old married physician, Methodist. Graduate University of Tennessee. Currently on active duty with Air Force as Flight Surgeon. Prefers pediatric practice. Available February, 1957. LW-240

◆

Physicians Wanted

Excellent opportunity: Physician to take over general practice with surgery if desired, in town of 4,500 population, located northwest Tennessee. Physician left for residency. PW-61

◆

Community in Middle Tennessee with trade area of 1,300 desires physician for general practice. 50-bed hospital located ten miles away. Housing and office available. PW-62

◆

Town in West Tennessee with population of 1,000 desires physician for general practice. Housing and office space available. PW-63

◆

Town with 8-bed hospital in Middle West Tennessee desires physician. Housing, office in hospital and all equipment including X-ray available. PW-66

◆

East Tennessee community with trade area of 10,000 desire physician. Housing and all equipment available. Plan to build clinic in near future. PW-69

◆

Physician in town of 2,500 population desires another physician to go into practice with him. Small hospital, wants man to work toward partnership. Good opportunity. PW-71

◆

West Tennessee community desires general practitioner. Population of town 1,000, of trade area 2,500. No other physician in town. Home and office available. PW-74

◆

Town in Middle Tennessee of 700 and trade area of 8,000 have been with medical service for ten years. Desire general practitioner. Have $10,000 pledged for building of clinic. PW-77

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The arguments in favor of the armchair treatment of myocardial infarction are presented. This concept seems to be gaining some ground, but, as is brought out in the discussion, its major danger lies in the possible tendency for both patient and doctor to forget time in the natural course of healing.

COMMENTS ON THE ARMCHAIR TREATMENT OF CORONARY THROMBOSIS*

CHARLES V. DOWLING, M.D.,† Memphis, Tenn.

When the topic of this paper was suggested, the initial reaction was that it certainly must be quite unnecessary to attempt tc adduce a rational justification of such an apparently rare triumph of common sense as the "chair treatment" of coronary thrombosis. The results of the method of treatment in question would seem to speak for themselves; the fact that it evolved in a frankly pragmatic way certainly detracts in no wise from its seemingly obvious validity. The wonder is, as with all retrospective inevitable deductions, that it was not formulated long ago.

It is to that giant in the field of clinical cardiology, Dr. Samuel A. Levine, that we are indebted for this recent revolution in the therapy of acute coronary thrombosis. In 1944, in an article concerning the abuse of bedrest in the management of congestive heart failure, Levine[1] mentioned a patient having severe cardiac decompensation with intractable pulmonary edema complicating an acute myocardial infarction. Admittedly, the failure was the pressing problem, it's inciting cause, the infarction, having become rather secondary in importance. Motivated by the age-old observation of the spontaneous preference of individuals with cardiogenic dyspnea for the upright posture, Levine had the patient moved from a bed to a chair, and allowed him to rest his feet on the floor. The improvement, it is recorded, was dramatic. Fortified and encouraged by the experience this very astute man then began to use the method with increasing frequency, and with continually gratifying results, in the treatment of congestive heart failure. The path of his reasoning, then, seems to have led him to the conclusion that if the subject with coronary thrombosis complicated by congestive heart failure did so much better in a chair, the individual suffering from acute myocardial infarction without the additional burden of decompensation might also do better on the same regimen. One assumes that the rationale, at least in part, was that if the upright posture was effective in the therapy of pulmonary edema, it might also be prophylactic against it. In any event, a series of cases was begun in which the chair treatment was employed as the method of choice in the handling of acute thrombosis. By 1951, when he reported his results, Levine[2, 3] had accumulated an impressive series of approximately 60 patients treated in this way, with a mortality figure very close to 10 per cent, certainly quite in line with the best available mortality figures for this condition. According to his report in 1952,[4] he had added another 30 or 40 patients, and the death rate had not changed. Since the publication of these articles the chair treatment has been adopted by an increasing number of clinicians with, one gathers by word of mouth, equally satisfying results. As with most therapeutic methods, one discerns in the application of this one, radical, moderate and conservative adherents, running the gamut from those who, like Levine, may get their patients into a chair in the

*Read before the meeting of Tennessee State Medical Association, April 11, 1956, Memphis, Tenn.

†From the Department of Medicine of the University of Tennessee College of Medicine and the Baptist Memorial Hospital, Memphis, Tenn.

first week, as soon as the pain has disappeared (some even before that time), to those who have come around to permitting use for the chair in the second or third week.

Now, despite the essentially trial-and-error kind of development of this therapeutic technique, it is not entirely upsupported by the data of more or less quantitative investigation. Perera and Berliner,[5] found that when patients with hypertensive cardiovascular disease are placed in bed, within 12 to 24 hours there is hemodilution, a rise in blood volume, an increase in venous pressure and a decrease in the vital capacity of the lung. Earlier, McMichael and McGibbon[6] had shown a 200 cc. diminution in the vital capacity upon lying down. In the light of these observations, Levine implies that the successful treatment of cardiac decompensation is brought about *in spite* of the use of enforced bedrest, and that it is because of the considerable effectiveness of the other measures employed, such as the use of digitalis, diuretics, salt restriction, etc., that compensation is restored. More recently, Coe,[7] in 1954, has reported that cardiac work in the armchair posture averages 23 per cent less than it does in the recumbent position; these are certainly reassuring data, despite the fact the series is too small to have statistical validity.

Levine proffers the argument that the head-up, vertically disposed body gains the advantage of gravity in propelling the cardiac output through the aorta and subsequent arterial ramifications, and that, *ergo*, the cardiac work is reduced. He states in this connection that in a closed elastic hydraulic system, duplication of the aorta in structure, more work is required to advance a fluid column when the tube is horizontal, since, when it is vertical, energy of the pump must be expended only to lift the fluid mass to the arch beyond which point gravity exerts a favorable effect, whereas in the horizontal position the expenditure of pump energy must be greater since gravity then adds no "*vis a tergo*." To us this attractively simple explanation is not entirely convincing since it ignores the important and complex variable of peripheral resistance.

Not the least of the benefits to be derived from the use of the chair treatment are the greater ease and speed of physical rehabilitation. There is little doubt that prolonged recumbency *per se* induces circulatory and metabolic abnormalities, even in normal persons. Dietrick and co-workers[8] have studied the effects of long continued bedrest on healthy human volunteers. They found that the exercise tolerance, as measured by currently used stress tests, was remarkably reduced for many weeks. Tilt-table studies showed a tendency to fainting. During bedrest there occurred a loss of those circulatory adjustments necessary for the maintenance of the erect posture. These changes were due principally to a diminution of tone of either muscles or vasculature of the lower extremities with venous engorgement, stasis, edema and increased capillary fragility. The early use of the chair in the management of acute coronary thrombosis reduces greatly the possibility of the development of such additional disability, and so facilitates ultimate recovery.

Probably as important, or more important, than any other dividend accruing from the use of this method is the tremendous and striking psychologic lift that chair-treated patients get. The air of impending disaster, the hopelessness and doom are considerably dissipated by the use of the chair in the therapy of acute coronary occlusion. The individual who can sit up gains a new measure of confidence, has much less reason for anxiety, and senses a more hopeful prognosis. The many individuals in the experience of all of us who have made a good physical recovery from attacks of myocardial infarction, yet who have remained emotionally debilitated should be more than an adequate incentive to consider seriously any measures that hold out some promise of helping to avoid the development of these distressing complications.

It might be well at this juncture to emphasize that the adoption of the chair treatment involves in no way the abandonment of the entirely valid principle of rest. The implication is simply that as great or greater a reduction in cardiac work can be effected in this way. Nor is it to be inferred that indications for the use of such important ancillary measures as anticoagulants, oxygen, drugs for arrhythmias, digi-

talis, etc., necessarily will be diminished in any way, or that ambulation must be instituted any sooner (although, parenthetically, it might be stated that there is a growing and apparently entirely reasonable tendency to the encouragement of earlier ambulation in certain individuals with coronary thrombosis). Treatment must continue to be individualized. The idea of enforced bedrest for six weeks or so for everybody, regardless of the severity of the illness or the presence of complications, is certainly no longer tenable.

In the minds of many, the only contraindication to this method is the presence of shock, which of course demands the use of the "head-down," "feet-up" position. However, once the peripheral vascular collapse is successfully reversed the chair may be used.

It has been my policy to permit the use of a comfortable bedside chair during the first week after infarction. Patients are helped into the chair and back into bed in exactly the same way as they are assisted in getting onto a bedside commode; the effort is certainly no greater. In the beginning two round-trips per day are permitted, and are made to coincide with mealtime, since most people would rather eat out of bed. Incidentally, it is the rare patient, in my experience, who needs to be fed by a nurse or other attendant. The patient's reaction to being in the chair is determined, and his pulse, respiration and blood pressure are noted during the first 20 to 30 minutes. He is allowed to stay out of bed as long as he is entirely comfortable and wishes to remain out; he may even be permitted to take his early afternoon nap in the chair. We have seen no complications attributable to this method, and have been extremely gratified by the results.

In summary, the chair treatment of coronary thrombosis would appear to be, therapeutically, a more effective way of carrying out the time-honored prescription of rest to the affected part. Great advantages derive from this method of providing rest, in the form of quicker and easier physical rehabilitation, and less emotional disability in a situation all too often richly productive of intense anxiety.

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Discussion

DR. R. L. WOOTEN (Memphis): Doctor Dowling has presented an excellent paper on the more recent concept of "armchair treatment" in myocardial infarction. So many are the points in his favor and so strongly does he feel toward them that I am sure he has wondered many times what I could possibly say. He is not alone,—I too have wondered.

Obviously, the armchair treatment cannot be challenged on the grounds of failing to give the maximum rest to the heart. The cardiac work, which is roughly the product of cardiac output and blood pressure, tends to be less in the sitting than in the recumbent position. At the same time, many of the undesirable physical and mental features of strict bed rest are obviated. The rehabilitation process is also facilitated.

My concept of proper management parallels that presented this morning. I would be the last to denounce the armchair approach, or any other form of therapy which would guarantee a more restful type of rest for the patient.

But we must be careful that our liberalizations are not exceeded and actual harm done. I feel that for the first few days absolute bed rest is advisable. More than half of all the deaths from myocardial infarction occur during the first two days. A state of shock is obviously a contraindication at any time.

With the patient sitting comfortably in a chair, it may be tempting for both the physician and the patient to begin more active ambulation at too early a time. The fact that he is able to sit in a chair evokes a feeling that the patient is not too ill. This may encourage an easy-going attitude toward what many times is a grave disease. In these instances just as much skill is

required in subduing the chair-patient as that needed in encouraging the bed-patient.

Unless conscientious restraint is practiced, the physician may allow the patient more activity than is physiologically sound. Even now, Beckwith and his group are allowing patients, in several instances, to walk to the bathroom once daily instead of using a bedside commode. These are patients whose infarcts are only two to five days old. Such generosity, I feel, is overly enthusiastic and a by-product of the chair treatment. If this trend continues, we may be seeing an increased incidence of ventricular aneurysms in the future.

Also, we have our reputations to consider. This, above all else, probably accounts for the relatively slow acceptance of the armchair treatment. To the layman, bed rest has become such an integral part of the treatment of myocardial infarction that any diversion would invite immediate skepticism. Should an unfortunate incident occur during early convalescence, there would be those who might criticize. I say this, not to place personal consideration above that of the patient, but te deter those physicians who would swing the pendulum too far toward early ambulation.

I feel that the chair treatment is good treatment, but as with any form of medical management, it needs a certain quantity of individualization. If such treatment would create laxity or give a false sense of security to the patient, I would be against it. If it would be responsible for premature and overly enthusiastic resumption of activity, I would be against it. We should remember that in doing away with bed rest, we must be particularly careful not to discard rest.

I enjoyed Dr. Dowling's presentation this morning, and appreciate the opportunity to participate in the discussion.

The University of Tennessee College of Medicine

Memphis, Tennessee

Announces

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*All courses are acknowledged for formal credit by the American Academy of General Practice.

The authors' results in the pulmonary rehabilitation of polio patients who have needed respirator support are of great interest. They show that most can be eventually discharged to their home independent of an aid to respiration.

RESPIRATORY FAILURE IN POLIOMYELITIS: RESULTS IN WEANING FROM RESPIRATORY AIDS*

RANDOLPH BATSON, M.D. and H.D. RILEY, JR., M.D.,† Nashville, Tenn.

Weaning, according to one definition, refers to "reconciliation to a severance." There is no better description of the technique by which *unnecessary* respiratory aids are withdrawn from patients who have experienced respiratory failure. It is also descriptive of the manner in which such patients are assisted in the adaptation or reconciliation to severance from undue emotional and physical dependency upon friends and relatives. A majority of patients with respiratory failure have concomitant extensive paralysis of other skeletal musculature, thereby increasing problems of emotional and physical rehabilitation. Space does not permit a detailed analysis of these aspects of our program. This report will be concerned principally with the weaning of patients from respiratory aids.

It was only a few years ago that the complexities in medical management of respirator patients were recognized. At that time the National Foundation for Infantile Paralysis initiated a program that drew these patients together in regional medical centers where patients might remain under group care for periods of several months, if necessary. Objectives in the formation of these regional facilities were as follows:

a. To improve patient care by grouping those with severe degrees of respiratory failure in regional medical centers.
b. To facilitate clinical investigation and scientific research in this field, utilizing clinical and basic science disciplines.
c. To conduct and improve medical and allied professional educational and training programs for personnel responsible for the care of these unusual cases.
d. To evaluate existing and new diagnostic and therapeutic equipment and techniques.
e. To provide a rehabilitation area for patients severely paralyzed following poliomyelitis.

The present study deals with the experience of one such poliomyelitis respiratory center and represents the efforts of a "team" of medical and paramedical persons. This multidiscipline approach is well demonstrated at the weekly disposition conference which consists of representatives from pediatrics, internal medicine, psychiatry, orthopedics, social service, dietetics, physical therapy, occupational therapy, equipment maintenance, city public schools, nursing service, hospital administration, and staff officers from the numerous medical services involved.

The 98 consecutively studied patients in this group all had respiratory failure severe enough to warrant confinement in a respirator. Eighty of these have now been discharged from the Center. During this period of observation, a total of 510 non-respirator poliomyelitis patients were observed within the same hospital division. Many of these had respiratory failure that did not necessitate assistive devices and are, therefore, not included in this study. In presenting our material we will refer to two principal categories of patients: the chronically ill patient, or those having been in respirators more than a month prior to their Vanderbilt admission, and the acutely ill patient, or those who were not in a respirator more than one month before their Vanderbilt admission. Also, it should be mentioned that our use of the term "lesser

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aids" implies the Cuirass (chest) respirator and the rocking bed.

The geographical locations of these patients at the time of their acute poliomyelitis infection included 14 different states principally in the Southeast. The sex distribution was approximately equal as was the number of patients over and under 15 years of age.

Table 1

Results on Discharge of 80 Respirator Patients

Completely weaned	54
Partially weaned	16
Dead	10

Table 1 summarizes our overall result with the management and disposition of 80 discharged respirator patients. In relation to any one particular patient, many factors operated to determine the success or failure of our weaning program. The most important of these was the duration of the dependency upon respiratory aids prior to their admission to the Center. In most cases this was obviously a reflection of the severity of residual respiratory failure. It was for this reason that we divided our patients into two categories, those chronically ill and those acutely ill on admission.

Thus in table 2 we see that complete weaning is more easily accomplished in patients seen from the onset of their acute illness. Chronically ill patients usually had more extensive paralytic involvement, markedly reduced pulmonary compliance, genito-urinary complications that so frequently accompany prolonged recumbency, emotional dependency on respiratory aids, and more often than not tracheostomies. In this group the average hospitalization prior to Vanderbilt admission was 135 days. With two exceptions, all of these patients were discharged from the Respiratory Center into their own homes. Discharges to the home usually required extensive social service investigation and training of the family in order to accomplish permanent home care, especially when it was necessary that the patients continue using respiratory aids. It is also significant that all patients were weaned completely from the tank respirator and only 16 required lesser aids at the time of their discharge. Of the 8 chronically ill patients admitted using lesser aids, all were completely weaned.

In regard to the 10 deaths, it should be noted that this represents the total mortality in the 510 consecutively hospitalized polio patients during this period of observation. This also includes all deaths in a large polio out-patient clinic where a significant number of the more severely involved patients have accumulated over a period of years preceding this period of observation. As one would expect, the most common causes of death were acute poliomyelitis, pulmonary complications following respiratory failure, and genitourinary tract complications.

During hospitalization, 35 patients had urinary tract infections, many of them on numerous occasions. This we attribute to factors such as catheterization that was so frequently necessary during acute illness, to prolonged recumbency with concomitant urinary stasis, and to urinary calculi which occurred in 16 patients. These urinary tract infections could usually be brought under control unless calculi were present. Numerous methods have been employed to prevent demineralization of bone and resultant stone formation due to the high calcium output. We have noticed a decrease in incidence since a rigid program

Table 2

Results in Weaning of 80 Discharged Respirator Patients

*Duration of Respirator Confinement**	*Admission Status* *Aid Used*	*Number Patients*	*Discharge Status* *Tank*	*L.A.***	*No Aid*	*Dead*
Less than 30 days	Tank	52	0	5	41	6
	L.A.	0	0	0	0	0
More than 30 days	Tank	20	0	11	5	4
	L.A.	8	0	0	8	0
Total		80	0	16	54	10

*At time of admission to Respiratory Center
**Lesser aids (rocking bed and/or chest respirator)

of unusually large fluid intakes was begun. For adults this requirement is 3 to 4 liters daily.

In regard to tracheostomies, we feel that we have been neither radical or conservative but have done tracheostomy when we felt that a clear airway could no longer be maintained without frequent suctioning. Actually 21 of our 80 discharged patients had tracheostomies at some time during their illness. All but one of these were eventually closed. During recent months we have utilized plastic tracheostomy tubing and feel that secretion due to irritation from a foreign body has been markedly reduced. In the process of weaning the patient from the tube it is customary to gradually obliterate the opening, allowing it finally to remain closed for several weeks before withdrawal. During this last period solid plastic tracheostomy plugs have been employed with a decrease in tracheal irritation and secretions. It may be added that contrary to common belief, the cutaneous fistulas do not usually close spontaneously after withdrawal of the tube and suturing is usually necessary. This is probably due to the fact that most openings had been patent for several months.

Table 3

Readmission of 80 Respirator Patients

Patients	*Readmissions*
54	0
17	1
3	2
3	3
2	4
1	5

Table 3 indicates the number of Vanderbilt readmissions of the 80 discharged patients. Twenty of these readmissions were for orthopedic reasons, usually reconstructive surgery, 17 because of respiratory tract complications, 16 because of genitourinary complications and 2 with illnesses not related to poliomyelitis. The patients who presented the greatest problems were, of course, the 16 patients who were so extensively paralyzed and had such severe respiratory failure that it was necessary to discharge them still dependent upon a respiratory aid.

Table 4 indicates the type of aids that these particular patients used.

Table 4

Type of Respirators Used After Discharge*

Cuirass only	7
Rocking bed only	2
Cuirass & rocking bed	7
Tank	0
Total Number Patients	16

*As of Dec. 7, 1955.

Table 5 shows the number of hours of assisted breathing that was required by these patients. Only 9 patients use their aids on what we might call a "full-time basis."

Table 5

Assisted Breathing in Patients Discharged Using Aids*

Hours per Day Assistance	*Number Patients*
0-6	3
7-12	4
12-18	3
19-24	6
Total	16

There seems to be a direct relationship between the degree of respiratory failure and the extent of skeletal paralysis. For this reason many of our patients though weaned from the respirator were still extremely disabled and required extensive rehabilitative training. Customarily both pulmonary and general rehabilitation programs proceed simultaneously.

Table 6

Functional Activities of 70 Discharged Respirator Patients*

	Need Assistance	*No Assistance*
Feeding	34	36
Dressing	48	22
Bathing	47	23
Toilet needs	45	25

*21 patients accomplish all the above activities without assistance.

At this time space does not permit a detailed analysis of the results or success in rehabilitation. However, table 6 summarizes the patients' accomplishments with a few of the more important functional activities. It should be remembered that 16 of our patients were almost totally paralyzed and, therefore, could accomplish none of these activities. They were dependent upon others for even passive movement. This greatly colored our overall statistics. In regard to the maximum mobilization that

could be achieved with these patients, 9 of the 70 discharged patients were totally confined to their beds, 31 used wheelchairs at least one hour daily, and 30 were ambulatory for at least one hour daily.

The development and understanding of glossopharyngeal ("Frog") breathing has been a milestone in the management of patients with decreased pulmonary reserve. This method of breathing consists of gulping air in increments of approximately 50 cc. and forcing it into the trachea by means of the glossopharyngeal musculature. These "gulps" are usually taken in rapid succession. Patients expert with this technique talk more understandably, can lift sputum more effectively and are more apt to preserve elasticity or compliance of the lungs and thorax. Many who ordinarily can remain out of the respirator for only a few minutes can, with frog breathing, stay out several hours. This obviously is a tremendous safety factor in that these patients are never totally dependent upon a mechanical device for respiration.

Table 7

Glossopharyngeal Breathing in Respirator Patients Presently Hospitalized (Dec. 1, 1955)

Patient	*Duration Illness*	*Vital Capacity Actual*	*GPF**	*Normal***
W.B.	14 mo.	900	0	3700
K.S.	13 mo.	400	0	3350
J.P.	12 mo.	225	0	3400
G.S.	13 mo.	50	300	3400
F.H.	13 mo.	150	1000	2260
J.S.	15 mo.	100	1100	3400
J.G.	15 mo.	250	1400	2400
B.H.	16 yr.	600	1630	3175
F.W.	15 mo.	700	2400	4150

*Glossopharyngeal ("Frog") breathing
**Calculated normal preceding illness.

Table 7 shows the results of glossopharyngeal breathing in patients who are presently (Dec. 1, 1955) hospitalized at the Respiratory Center. By examining this table one can compare vital capacities with glossopharyngeal breathing with those in which glossopharyngeal breathing was not used and also compare these with the normal expected vital capacity at the particular age and height. During recent months we have realized greater success in teaching this technique to patients by utilizing other patients for instruction and also by the use of motion pictures. Some patients master the technique after only one instructional period while others require several months.

Questions frequently arise in regard to the cost of this particular type of medical care. Needless to say, the expense is great, but it is equally great whether the patients are treated individually in local facilities, or whether they are temporarily grouped in respiratory centers for intensive pulmonary and general rehabilitation. Almost without exception chronically ill respiratory patients were in hospitals prior to admission here and usually had constant attendance by special nurses. With two exceptions all of our patients have been discharged to their homes. Several did require attendants other than their families during 8 to 16 hours of the day. The average days hospitalization per patient prior to admission to the respiratory center was 268 at an estimated cost of $6300. The average duration of hospitalization at the Vanderbilt Respiratory Center was 135 days at a cost of $3,194.

One cannot help but speculate as to the ultimate fate of the centers for poliomyelitis respiratory rehabilitation. It becomes increasingly apparent that poliomyelitis vaccine properly administered can eliminate paralytic poliomyelitis from a population. Certainly, the medical needs of the 1700 respirator patients in the United States and the new patients appearing will necessitate the operation of these 15 centers for many years. Eventually, however, these units with their team of personnel must shift their interests to other conditions or else dissolve. The pattern will vary in different localities where different situations exist. However, with the present trend towards rehabilitation, one would suspect that most of these units can and will be converted into facilities concerned with the care of patients with severe physical disabilities due to other diseases. In this case, the years of experience that were required for each center to develop its methods of administration, evaluation, treatment, and disposition will not have been wasted but will serve as a foundation and guide for the management of other diseases of the lung and musculoskeletal system.

Discussion

DR. WILLIAM HILLMAN (Nashville): The excellent report and analysis presented by Drs. Batson and Riley is of great significance from two

standpoints. The first is concerned with the proper approach and techniques in the care of patients with respiratory failure. The second is of concern to all physicians since it is a clear demonstration of the necessity of intensive planning and teamwork in the care of any complex medical illnesses which require the services of many professional disciplines.

The respiratory unit has been quite successful in achieving the objectives stated at the outset, and it is today with some degree of assurance that the team headed by Dr. Batson and Dr. Riley can approach the process of rehabilitation in patients with respiratory failure and extensive paralysis of other skeletal musculature. This demonstration has great implications for the care of other diagnostic categories including the paraplegic patient, the patient having had a severe cerebrovascular accident, and patients with multiple injuries.

The study reported here again confirms the fact offered by other rehabilitation centers that the cost of care can be significantly lowered by the group approach rather than on an *a la carte* basis.

Congratulations are in order for Dr. Batson and Dr. Riley, not only for the excellence of this report, but the record should contain an acknowledgment of the fine work of the participating group. This would include the nursing service, the physical therapists, occupational therapists, social service workers and physicians from virtually every department. It has been a most profitable experience for every member of the team to gain an appreciation of the amount of detail work which has been required in both the planning and daily care of the poliomyelitis respiratory unit. Should it occur in the next few years that poliomyelitis be controlled to the extent hinted in some of the preliminary reports you have heard, there will be no major change required to shift gears from this single category of patients to all types of seriously disabled or handicapped patients who need the type of complex total care which has been demonstrated here.

Status of Fifty Patients Four and a Half to Seven Years after Mitral Commissurotomy. Janton, O. H., Davila, Julio C., and Glover, Robert P. Circulation 14:175, 1956.

The clinical, operative, and laboratory findings are presented of 50 consecutive patients on whom mitral commissurotomy was performed between January 1949 and March 1951 and who have been followed for a minimum of four and a half years. Thirty-six females and 14 males were included with an average age at the time of surgery of 34 years. Forty per cent of the patients presented a definite history of previous rheumatic infection and each of the entire group complained of functional incapacity of some degree. Symptomatology consisted of hemoptysis in 46 per cent, one or more episodes of heart failure in 54 per cent, arterial embolism in 12 per cent. Classification of the preoperative patients consisted of none in class I, 10 per cent in class II, 72 per cent in class III and 18 per cent in class IV.

Each of these patients was subjected to the classical or standard mitral commissurotomy described previously by the same authors. Three patients (six per cent) died within the first postoperative month. The first died from acute cardiac failure; the second died from operative production of excessive mitral insufficiency; the third patient died two hours after surgery due to unexplained shock. Six additional patients died after the first postoperative month, making a late mortality rate within the first three postoperative years of 12 per cent.

Results are encouraging. The five patients originally in class II have lived a relatively normal life since surgery. Thirty of the 36 patients originally placed in class III are living, 11 of these being asymptomatic. Only one patient has become incapacitated and is now in class IV. Of the nine patients originally placed in class IV six are living and one is asymptomatic with only one remaining in class IV. Only 10 per cent of the original group of patients regard themselves as unimproved.

No definite conclusions can be made regarding the present status of these patients on the basis of their preoperative murmurs alone. Twenty-five of the 41 living patients had "pure" mitral stenosis on the basis of auscultation. Electrocardiographic changes following surgery do not regularly show conclusive evidence of improvement. Fluoroscopically and radiographically 24 per cent of the 41 living patients have a smaller cardiac silhouette. Forty-nine per cent of the living patients had valvular calcification and they have not been so greatly improved as the 51 per cent without calcification. Restenosis of the mitral valve has not been observed in the 41 living patients and only one operative embolus was produced. This report establishes that commissurotomy confers a genuine and usually persistent benefit to the patient with stenosis of the mitral valve. (Abstracted for the Middle Tennessee Heart Association, by Douglas H. Riddell, M.D., Nashville.)

The serious nature of coronary arteriosclerosis in the diabetic patient is emphasized. The increased incidence of coronary closure is startling.

CORONARY ARTERY DISEASE IN THE DIABETIC*

ALBERT WEINSTEIN, M.D.,† Nashville, Tenn.

With the occurrence in the recent past of overt clinical evidence of obstruction of a coronary artery in a certain former Army General, the entire world has become aware of this grave problem. The average laymen, after reading the syndicated articles aimed at his enlightenment, accepts this training, and the drawing room conversations have interested you as they have illuminated me, I am sure. Even prior to this becoming the general public's problem, the concern of the medical profession in this matter has been very great indeed.

There are a few basic facts that should be included in this discussion. All are aware that the male is the sex more susceptible to coronary artery disease. Dock[1] in his recent investigation may have found the basic factor. In a study of the coronary arteries in babies who died within twenty-four hours after delivery, he found that the male infant begins life with the coronary intima three times as thick as that of the female. This difference continues throughout life. This thickening of the intima of the coronary arteries of the male varying from 20 to 600 per cent in thickness as compared to the media, is, in his opinion, the underlying cause of the predilection of the coronary artery of the male for this particular disease process.

To be evaluated, in addition to this basic structural difference, are the role of cholesterol and the factors of stress. The debate on cholesterol continues, and is so unsettled that I hesitate to enter into a review of the problem at this time. The role of stress occasioned by the increased blood pressure is clearer. The finding of an increased incidence of arteriosclerosis in the hypertensive patient, plus the fact that there is a greater incidence in all, including the normotensive, of the degree of arteriosclerosis in the legs where the blood pressure usually excedes that in the upper extremities, are important facts. More impressive is the finding of a selective arteriosclerosis in the pulmonary arteries of patients with primary pulmonary hypertension, the general arterial tree of the greater circulation being relatively spared. We gather that the basic defect is the above discussed fundamental histologic alteration described by Dock, the conditioning factors being an increased blood pressure and a high level of serum cholesterol and cholesterol esters. This latter factor is perhaps related to a high cholesterol diet, and to a fundamental metabolic defect, perhaps an inherited defect.

There has been the long established clinical impression that diabetics are more vulnerable to damage of various parts of the vascular tree, particularly the coronary, cerebral and renal arteries, and the arteries of the extremities. Statistical confirmation of these impressions has been reconfirmed many times.

Among 200 autopsies on soldiers of the United States Army killed in action in Korea, representing an average age of 22.1 years, there was evidence of coronary arteriosclerosis in 77.3 per cent. Similar studies in young diabetics who have had diabetes mellatus for years, reveal at least this frequency of coronary artery disease, even though the majority of these diabetic patients died with renal disease.

Arteriosclerotic heart disease was the cause of death in 6.1 per cent of the diabetics dying at the Joslin Clinic between 1898 and 1914, and now, in 1950 to 1952, is the cause of death in 47.6 per cent of this Clinic's patients[2]. This increased frequency, of course, reflects in part the prolongation of life of the diabetic following the introduction of insulin and improvement in dietary care.

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*Read before The Tennessee Diabetes Association, April 9, 1956, Memphis, Tenn.

†From the Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tenn.

Clauson and Bell[3], from an analysis of 50,000 autopsies, reported that in the diabetic, fatal coronary artery heart disease was seen twice as frequently in the diabetic males as opposed to the nondiabetic male, and met with three times more commonly among female diabetics as compared to the nondiabetic female. This survey was published in 1949. The more recent statistical investigations give figures even more impressive.

In a composite survey, the male diabetic has an increased tendency to coronary arteriosclerosis eleven times that of the nondiabetic male, and the female diabetic has coronary artery disease eighty times more frequently than the nondiabetic female.

Although coronary artery disease is by far more frequent in the nondiabetic male, as compared to the nondiabetic female, there is not too much difference in the frequency of occurrence of the disease in the two sexes in the diabetic. In the general series of coronary thrombosis studied by Master and his group[4], the ratio of men to women was 3.4 to 1. In a series of 761 autopsies among diabetics reported by Warren[7] 54.4 per cent of the patients were females. The average age of the female was 63.1 compared to the average age of 61.5 years among the males. The duration of the diabetes was essentially the same, 11.5 years for the females and 12.5 years for the males.

Therefore, as a consequence of having diabetes the female waives her relative immunity, has coronary thrombosis equally as frequent as the male and with the same degree of disaster.

The time in life of occurrence of clinical coronary artery disease is significantly earlier in the diabetic, and this holds true for the generally distributed arteriosclerosis as well.

In general, the outlook among the diabetic patients following the occurrence of a coronary thrombosis is not as good as in the nondiabetics. Katz and his group of workers[5] studied 507 patients with myocardial infarction. Of the diabetics in this group 50.8 per cent died within the first two months, contrasted with only 26.6 per cent of deaths in the nondiabetic patients.

There are several facts that may explain this striking difference. In general, it is probable that the intensity of the arteriosclerosis was greater in the diabetics. The average diabetic in this older age group is overweight. In addition, the occurrence of a coronary thrombosis in the diabetic usually results in a serious degree of imbalance in the metabolic state. Indeed, in a group of patients observed a few years ago[5], the severe disruption of a previously good metabolic supervision was the presenting and the most impressive evidence of the coronary thrombosis. The recent experimental observation of the loss of glycogen from infarcted areas of the myocardium, and the fact that the myocardium utilizes glucose, pyruvate and lactate poorly in the presence of hyperglycemia, all point up the added burden which the diabetic, who has suffered a coronary thrombosis, must shoulder.

As points of prophylaxis, hoping to prevent or delay an attack of coronary thrombosis, the diabetic should be kept thin, as should the nondiabetic, and if angina pectoris occurs, strict avoidance of pain provoking situations should be enforced here also.

When the infarction occurs, the need for the relief of pain, rest, and the use of anticoagulants, avoidance of iced fluids, guarding against the occurrence of complicating and perhaps fatal arrythmias and the development of congestive failure are all matters of routine which apply to the diabetic as well as to the nondiabetic.

In an attack perhaps more haste than ordinary should be exercised in elevating the blood pressure above shock levels by the use of norepinephrine, in view of the usual presence of a high degree of arteriosclerosis in the legs, which would, therefore, favor the possibility of gangrene of the toes or even an extremity in the presence of prolonged hypotension.

In the diabetic the question of the use of insulin and diet are important. In general, it seems sensible and important to overcome acidosis and to keep the metabolic balance in proper equilibrium. Hypoglycemia is to be avoided with care, in view of the theoretically possible worsening of the degree of the coronary damage.

The attitude relative to the use of insulin is one of opinion. There are in the

literature experiences reporting that insulin has a direct myocardial toxic effect and that sudden deaths during the course of a myocardial infarction are more common in insulin-treated cases. However, the clinical facts today do not support this idea. No one ever deliberately induces hypoglycemia in a patient except that the medical attendant may not fear its occurrence in a young newly-uninitiated diabetic in order to acquaint him with the symptomatology of hypoglycemia while the patient is under direct supervision. On the other side of the picture is the fact that cardiac glycogen increases ordinarily after the injection of insulin. Indeed, as a consequence of hypoglycemia this increase in myocardial glycogen may also follow. In this instance it is due to the induced secondary elaboration of adrenalin which follows hypoglycemia. It is important to remember that utilization by the myocardium of glucose, pyruvate and lactate is reduced in the presence of hyperglycemia, as mentioned above.

One should consider also the report by Himwich, Goldfarb and Nahum[6], who recommend the use of insulin plus glucose, because the infarcted area of the myocardium lose its glycogen content. All of these experimental data suggest that good diabetic metabolic control is important.

My own feeling is that the fear of the employment of insulin in the diabetic with coronary thrombosis is overly emphasized. I think one should aim at good diabetic regulation in this complex clinical state just as in other situations. It is true it may be more difficult to attain due to irregular and poor food intake, poor appetite, uncertain food retention due to nausea and vomiting, poor absorption from the intestinal tract, due to shock and alteration in the metabolic response because of the fever. Therefore, greater care naturally has to be used. It would be hazardous to utilize long acting insulins during the acute days following the occurrence of the infarction. Therefore, smaller and more frequent doses of regular insulin should be used when only short term predictions of food intake can be estimated. If the patient is unable to retain fluids, I believe that 5 per cent dextrose should be given slowly, intravenously, with regular insulin added in the amounts of 20 units added directly into each 1000 cc. of the infusion. I do not believe that the size of the infarcted area will increase if hypoglycemia should occur. It is possible that the increased elaboration of epinephrine that follows profound hypoglycemia may result in an unfavorable irritability of the injured myocardium, even though this epinephrine in itself increases myocardial glycogen content. This irritability may result in various types of cardiac arrythmia and might conceivably in this way produce an unfavorable outcome. However, from what we know about this mechanism it is probable that the hypoglycemia would need to be quite profound to precipitate an unfavorable degree of hyperadrenalinemia.

It is unlikely that hypoglycemia *per se* actually has anything to do with the initiation of a thrombus in a coronary artery, or has any role in increasing the extent of an already existing thrombus.

The question of the value of early ambulation following the thrombosis, the routine use of quinidine in an attempt to prevent ventricular arrythmia, the employment of large doses of atropine for relief of pain in the acute stages of the infarction, the type of narcotic to be employed, all of these routine matters apply to the diabetic as they do to the nondiabetic.

I do believe one can make a case for early ambulation in the treatment of coronary thrombosis in the diabetic. In the presence of extensive general arteriosclerosis, and with an associated fall in arterial pressure, as discussed earlier, and the forward failure of the heart, which follows an obstruction to a coronary artery, the stage is set for ischemia and even gangrene of the lower extremities and possible phlebothrombosis or thrombophlebitis. It is logical that in this situation early ambulation, the use of the cardiac bed, arm chair rest with dependent position of the lower extremities might all help overcome the failure of blood-flow to the legs.

The adrenal cortical steroids have been used in some instances for the treatment of shock following coronary thrombosis. Their use in the diabetic would seem to be contraindicated, in view of their metabolic effect.

Summary

(1) Arteriosclerosis, particularly coronary arteriosclerosis, is almost universally present in the older diabetic.

(2) The diabetic female is 80 times more apt to have a coronary thrombosis than the nondiabetic female.

(3) The diabetic male is 11 times more apt to have a coronary thrombosis than the nondiabetic male.

(4) The nondiabetic male has coronary artery thrombosis four times as often as the nondiabetic female.

(5) In contrast, the diabetic male and the diabetic female have coronary thrombosis with equal frequency.

(6) The life expectancy of the diabetic following a coronary thrombosis is about half as good as that of the nondiabetic.

(7) The metabolism of the myocardium is interfered with by hyperglycemia and is improved by the lowering of the blood sugar following the use of insulin.

(8) No definite evidence exists to serve as an interdiction to the use of insulin in the diabetic with a coronary thrombosis, for fear it may increase the size of the arterial thrombus or precipitate angina or favor the occurrence of a fatal arrythmia.

(9) Good diabetic metabolism control should be carried out fearlessly, and routine so-called "coronary care" be given the diabetic without restriction.

(10) There is no good evidence to suggest that the development of coronary thrombosis in the diabetic patient can be prevented by good metabolic control. This final unhappy thought should challenge us mightily.

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Treatment of Osteoarthritis of the Hip by Osteotomy. J. Bone & Joint Surg. 38-B, 468, J. P. Campbell and J. P. Jackson.

The symptom of pain resulting from osteoarthritis of the hip is the indication for operative intervention. Operative procedures must be directed toward giving a stable, painless hip with a full range of motion and no shortening. Forty-three patients are presented which have been treated by osteotomy and internal fixation. Eighteen of the cases have been followed for between 10 to 20 years. Twelve of these patients have no pain and the remaining six have only slight pain. Some loss of motion is a fairly constant finding after this operative procedure. However, almost half of the patients investigateed retained a satisfactory range of motion.

It is concluded that femoral osteotomy is a worthwhile procedure as 87 per cent of the patients were largely relieved of their pain. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

The author illustrates the effectiveness of the corticosteroids in the management of ophthalmic herpes.

HERPES ZOSTER OPHTHALMICUS AND ITS TREATMENT*

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The treatment of herpes zoster ophthalmicus with cortisone, hydrocortisone and corticotropin is now at a stage where satisfactory results can be anticipated in most instances. The mechanism for the beneficial results seen in these cases is not known. The diminution of the inflammatory response, the decrease in capillary permeability and the inhibition of the cellular reaction which occur when these corticosteroids are used in inflammatory diseases are well known, and account for the fact that the patient appears to be better after their use. However, these agents do not have any bacteriostatic or viralcidal action. This has been pointed out by many investigators working in various fields who have shown that although a case of tuberculosis, pneumonia, or typhoid fever appears to be improved after starting treatment with these hormones, the causative organisms remain viable, infective, and perhaps even more numerous and virulant. More pertinent to this discussion is the now accepted, and amply verified observation that the use of cortisone, hydrocortisone or corticotropin in the treatment of herpes simplex of the cornea is definitely contra-indicated.

However, in the case of herpes zoster we have an entirely different and unrelated disease which, although it is also caused by a virus, presents a different clinical picture and responds dramatically to cortisone, hydrocortisone, and corticotropin. There is reason to believe that it would do just as well with the newly released steroid Meticortandracin.

Etiology

Herpes zoster is caused by a virus which is now believed by Simpson,[1] and Blank and Rake[2] and others to be identical with the virus of chickenpox (varicella). There is much evidence for this, such as: an outbreak of herpes zoster in a household after exposure to chickenpox from one of the members of the family and vice versa; apparently complete cross immunity to each disease; the recovery of identically appearing viruses from the skin lesions in each disease; the similarity of the clinical lesion; the similarity of the reproductive cycles; and the same order of infectiousness against those who have had neither disease. While chickenpox is a disease of children, herpes zoster is more commonly observed in the ages 20 to 65 years. Blank and Rake[2] have quoted others who feel that the virus has perhaps lain dormant in the tissues following a subclinical unrecognized case of chickenpox for many years before it makes its appearance as herpes zoster. Just what the mechanism is for transmission of the virus from skin to nerve or nerve to skin is not known. The presence of the virus in spinal fluid or nerve tissue has never been thoroughly proven although the presence of inclusion bodies suggests that the virus does invade the nervous system.

There are said to be two forms of herpes zoster: an epidemic and a symptomatic form. However, both forms have yielded the same virus and presented the same clinical picture. Trauma, X-ray therapy, leukemia, intramuscular injections, removal of corneal foreign bodies, surgical procedures and a host of various diseases are said to be precipitating factors. Some of this may be true, since, for example leukemia is associated with herpes zoster so frequently that it has been suggested every patient with zoster should have a blood count to rule out leukemia.

Clinical Course

The yearly incidence of herpes zoster according to Seiler (quoted by Blank and Rake) is 2 per 1000 population. The clinical picture may take one of two forms. cutaneous and mucous membrane involvement, or nerve involvement, and usually both are present.

*Read before the Meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 11, 1955, Chattanooga, Tenn.

The pain of zoster may precede the skin and mucous membrane eruption by one to ten days, or the eruption may precede the development of pain. Pain usually is the predominant complaint. It is described as excruciating, deep, boring, tight and aching and indeed is considered to be one of the most exhausting and prostrating of all types of pain. In some instances, however, pain is slight or even absent.

The eruption consists of many vesicles on a reddened base and is confined to skin dermatomes. This produces a typical picture of a rather sharply demarcated lesion of the skin or mucous membrane associated with considerable pain. Any part of the body may be affected, but the thoracic region accounts for about 55 percent of the sites of involvement, the cervical area 12 to 20 percent of the sites, and the ophthalmic division of the 5th cranial nerve about 10 to 15 percent of the sites of involvement. We are concerned here with the last of these areas.

The picture is one of numerous vesicles containing a yellowish clear fluid in the skin of the scalp and forehead, confined to one side of the face along with the upper lid of the same side, and occasionally along the side of the nose down to its tip. The eyeball is not involved in a majority of cases (although Duke Elder[3] says it is in 50 percent), but it has been often stated that if the nasociliary nerve, which supplies sensation to the side and the tip of the nose is involved, the eyeball is likely to be severely affected. The skin is usually extremely tender, swollen, and red. About 4 percent of the patients may have a few vesicles located on other parts of the body unrelated to the dermatome primarily involved. The usual course of the disease is about two to three weeks and it disappears spontaneously. Pain usually takes somewhat longer to disappear and may last for as long as several months.

The ocular manifestations or complications of herpes zoster can be either keratitis, iritis, scleritis, optic neuritis or paresis of ocular muscles. These may develop simultaneously with the appearance of the skin lesions but more commonly follow them by one to three days.

Duke Elder[3] states that there is some corneal edema in every case of herpes zoster in the active eruptive stage. Corneal sensitivity is decreased a varying amount, the intra-ocular pressure is somewhat lowered, and the lids are extremely sensitive and edematous, although, again, there may be only a little discomfort in some cases.

(a) *Keratitis.* Here the chief lesion is a collection of tiny subepithelial infiltrates composed of minute dots of opacity aggregated into large discrete round spots. While most of these remain in the anterior cornea, some may be deeper. A diffuse corneal haziness, edematous stria, and in the more severe cases, fold in Descemet's membrane may be present. Epithelial vesiculation forms over the spots and these may then rupture leaving the path clear for the development of severe corneal ulcers due to secondary infection. The corneal opacities may clear spontaneously in two to three weeks but some slight hazy opacification may remain permanently. Corneal sensation usually returns slowly, the rate depending on the degree of damage to the cells in the Gasserian ganglion.

(b) *Iritis.* This always accompanies the keratitis in which there is then the complete picture of acute non-granulomatous iridocyclitis. The development of posterior synechia is not at all unusual. Cases of unilateral Argyl Robertson pupil have been described by several authors. (Naquin[4].) Patchy iris atrophy is said by Duke Elder to be a characteristic sequel. Occasionally, iritis occurs without the keratitis. Glaucoma, secondary to the iritis, has been noted on several occasions.

(c) *Scleritis.* This is a rare complication occuring late in the disease and accounts frequently for a paralytic mydriasis. Small round nodules appear two to three months after the cutaneous eruption has subsided. These are painful but after several months gradually fade away leaving a permanent slate colored pigmented scar. They are subject to recurrence.

(d) *Paresis of Muscles.* The complication of paresis of ocular muscles is not unusual. The third nerve is affected more often, and then only some of the branches may be involved, rarely the whole nerve. The fourth and sixth nerves are made

paretic only uncommonly. The palsy is of short duration as a rule.

(e) *Optic Neuritis.* Here again is a rare ocular complication of herpes zoster ophthalmicus. Complete blindness may follow such an attack.

Case Reports

The following two case reports will illustrate some of the clinical features of herpes zoster ophthalmicus and the results obtained when treated with cortisone.

Case 1. A white woman, age 51 at the time of my first examination, was first seen in January, 1954. She complained of some pain about the left eye six days before I was consulted over the telephone. Two days later she broke out with herpes zoster ophthalmicus including involvement of the nasociliary nerve.

Her *past history* was characterized by an episode of acute optic neuritis in the left eye 9 years previously, the etiology of which was undetermined. Her vision returned to 20/30 prior to her attack of zoster, however.

She had already been given 1000 micrograms of vitamin B_{12} intramuscularly for three days before she called me. Neo-cortef ophthalmic ointment and homatropine, 2 percent solution, for use locally in the eye were prescribed. The next day there was marked improvement in both the edema and in the subsidence of what little pain she had.

The vision was 20/50. My first office examination was made the day after I was first consulted on the telephone. At this time, there was still the typical cutaneous eruption. Corneal sensitivity did not seem to be reduced, there was only moderate edema of the bulbar conjunctiva; there were no KP and no AR.

A week later she was much improved in appearance in that her rash had almost entirely gone. She had not used the Neo-cortef ointment for a day and a half, and the slit-lamp examination revealed several small corneal epithelial opacities. There was also a thin sheet of tiny non-granulomatous KP, but no AR or synechia. She was instructed to continue the homatropine drops twice a day and to use Neosone ophthalmic drops four times a day. Six days later, the eye was white and the skin was practically clear except for a faintly reddened and swollen upper lid. Slit-lamp examination revealed one or two faint superficial corneal areas of haziness, one small area of KP temporal to the center of the cornea and no AR. She was taken off all local medication.

Six weeks later the vision in the left eye was 20/30 with the pinhole. There had been no more pain or discomfort in the last two weeks. Several superficial corneal stromal opacities were seen and a few old pigmented KP remained. There were no synechia. Aside from the topical treatment and the B_{12} she received initially, she had no other treatment.

Case 2. A white woman, 59 years old when I first saw her on October 1, 1953, complained of an aching and uncomfortable feeling in the left eye for two days. At this time, her vision was 20/20 in each eye.

Her past history revealed an episode of brucellosis in the spring of 1953, which was treated with Terramycin and streptomycin and was pronounced cured in June or July, 1953. When I first examined her the eye was normal except for one or two small epithelial defects in the upper temporal quadrant of the cornea which stained with fluorescein. I thought this represented a slight corneal abrasion and prescribed Neosone ophthalmic ointment three times a day. The next day, she broke out with a typical herpes zoster ophthalmicus on the left side associated with severe pain. The nasociliary nerve was involved. She was hospitalized and Protamide 1.3 cc, codeine and Empirin No. 3 were prescribed to control pain but were not very effective. Aureomycin ointment topically twice daily and Aureomycin 250 mg. four times a day by mouth were prescribed on the second hospital day. A smallpox vaccination was also done. Corneal sensitivity was not diminished and there was no staining of the cornea with fluorescein.

On October 4, there was more pain and the skin eruption had progressed to involve the tip of the nose. Conjunctival edema was slight. Demerol 100 mg. every four hours replaced the codeine. On October 5, the left eye was greatly congested and showed marked chemosis and photophobia. The cornea did not stain and the iris appeared to be normal. Homatropine, 4 percent ophthalmic solution, was started twice daily, and the local Aureomycin increased to three times daily. On October 6, new skin lesions appeared on the right side of the nose, on the chest and the right side of the neck. Cortisone ophthalmic suspension, 2.5 percent, was started every two hours along with cortisone 200 mg. by mouth and potassium chloride Enseals. Vitamin B_{12}, 1000 micrograms daily, by intramuscular injection was also started. On October 7, the cortisone by mouth was reduced to 100 mg. She was so much more comfortable and the ocular picture so much improved after just one day of cortisone therapy that the protamide injections were discontinued, and Demerol was cut to 75 mg. as needed. The ocular chemosis had disappeared altogether, but the corneal sensitivity had decreased only little. On October 8, cortisone by mouth was reduced to 50 mg. a day. The ocular picture continued to improve in that edema of the lid was less and the cornea was still clear. Demerol and oral Aureomycin were discontinued. On October 9, cortisone by mouth was reduced to 25 mg., and the local use of Aureomycin was stopped. The only ocular sign of herpes zoster now was a slight decrease in corneal sensitivity. On October 10, cortisone by mouth was stopped as well as the

potassium chloride. She was discharged from the hospital on October 15, with instructions to keep using the 2.5 percent ophthalmic suspension of cortisone in her eye about three or four times a day.

When next seen in my office on October 19, the skin lesions had all healed. She had considerable photophobia and blephorospasm although the cornea was completely anesthetic (18 days after eruption). However, the cornea did not stain with fluorescein. She was instructed to continue with cortisone (2.5 percent) drops three times daily, homatropine 2 percent twice daily, and phenobarbital Spansules twice daily.

Two weeks later she was again in the office complaining of numbness in the scalp and forehead and photophobia. She said she felt as though the zoster was coming back but no skin lesions were visible. Corneal sensitivity was still reduced. Both eyes were white; palpebral edema had disappeared; the pupil was dilated and slightly eccentric in the lower nasal quadrant. There were no signs of iritis or keratitis by slit-lamp examination. She was told to discontinue the homatropine and cortisone drops. Five days later, she was put back on vitamin B_{12} 500 micrograms daily for pain, and cortisone 0.5 percent ophthalmic suspension twice daily. Sixteen days later the vision was corrected to 20/25 in each eye. She still had some epiphora; ptosis, which had been overlooked earlier, was first noticed as being real; because of her previous blephoraspasm, there was a left hyper, more pronounced with the eyes down and right and she complained of diplopia for distant but not for near vision. (21 days after eruption.) The cornea was clear except for a few old crenated KP; there was no AR. The pupil was fixed and dilated due to the development of posterior synechia. The intraocular pressure measured 20.0 mm. of Hg. in each eye. The ophthalmoscopic examination was normal.

Twenty-four days later the diplopia and ptosis had disappeared. There was still complete corneal anesthesia. On February 13, 1954, she was again seen in the office; she was still using cortisone 0.5 percent three times daily. The pupil, dilated and fixed by six small posterior synechia, could be made smaller with miotics which helped to reduce the photophobia. On April 15, she was essentially the same, but still complaining of itching of the scalp.

On July 17, 1954 (10½ months after the initial eruption) she returned with a central corneal epithelial staining defect. There was a three plus aqueous ray with cells in the aqueous. After three days treatment with Neo-cortef drops every two hours, the cornea was clear, the aqueous ray was negative, and there were no KP. She continued the treatment for two more days and then stopped. At this last episode, she stated that her head felt worse and this may have been a true local recurrence of zoster.

I last saw her on February 22, 1955, at which time she had vision correctible to 20/20 in each eye. The eyes were quiet of symptoms and, except for the dilated fixed pupil due to the posterior synechia, she had no evidence of any ocular difficulty.

Comment

The patient in Case 1 had herpes zoster ophthalmicus with keratitis. Treatment with local cortisone combined with neomycin and homatropine alone was sufficient to prevent iritis. The only residua of the infection were a few faint corneal subepithelial spots. I firmly believe that without the cortisone this patient would have had a much more stormy course. In the second case there was a mild iritis without much evidence of keratitis. In addition, the patient had partial involvement of her left third cranial nerve resulting in a transient ptosis and left hypertropia. Her only residual defect was a fixed dilated pupil due to the formation of posterior synechia which developed when the pupil was dilated. Ten and a half months after her initial outbreak, she had a mild local recurrence of iritis along with a minimal corneal epithelial defect. Again, I believe that this patient would have had severe ocular complications if it had not been for the use of cortisone and hydrocortisone. In the second case, the cortisone probably was not used in doses large enough, or for a long enough period of time, in order to prevent the posterior synechia. However, I think that she would have had a keratitis without it and a more marked degree of iritis.

The use of the corticosteroids in the treatment of herpes zoster has recently been emphasized by Scheie and Alper[5]. In summarizing the literature, they found 24 cases of zoster which were treated with cortisone, hydrocortisone, or corticotropin. Of these 24 cases, 15 had herpes zoster ophthalmicus with ocular involvement. Thirteen recovered promptly and completely, one improved after three months and one relapsed. Scheie and Alper then presented the case histories of 11 patients with herpes zoster ophthalmicus all of whom were materially benefitted when treated with the corticosteroids. In their patients dramatic relief from pain occurred within 24 to 36 hours after starting treatment. The ocular inflammatory signs showed marked rapid im-

provement in most cases. Doenges[6] has also reported that cortisone is of real value in ophthalmic herpes zoster where there is danger of corneal ulceration. On the other hand, Hogan, Thygeson, and Kimura[7] did not see the comparable improvement in their cases of herpes zoster when treated with the hormonal agents. Also Kupperman (quoted by Blank and Rake[2]) has reported the development of herpes zoster in three patients who were being treated with cortisone for arthritis, and in whom the course of the zoster was unaffected.

Since the disease is self-limited and spontaneously cures itself in a few weeks, the treatment is for the avoidance of ocular complications and the control of pain. There is now substantial evidence that this may be done with topical and systemic administration of cortisone, hydrocortisone, and corticotropin. Heretofore, pain has been most difficult to control. Heavy sedation has not always given the degree of relief that one would like to see. Furthermore, there is always the danger of drug addiction to some of the more potent analgesics used in the control of pain. The corticosteroids have been shown to be of great help in obtaining relief from pain in herpes zoster.

There is no reason to believe that the treatment of herpes zoster with the corticosteroids will aggravate the infection or make it worse as one would expect when used in treating herpes simplex. These are two different diseases behaving in an entirely different manner, and are treated in different ways by different drugs.

Summary

The cause of herpes zoster is a virus identical to the one causing chickenpox (varicella). The ophthalmic branch of the fifth cranial nerve is the site of involvement in 10 to 15 percent of cases. Ocular manifestations occur in slightly less than 50 percent of the cases of herpes zoster ophthalmicus. These complications are keratitis, iritis, ocular muscle palsies, scleritis, and optic neuritis.

Two cases of herpes zoster ophthalmicus are reported both of whom showed marked improvement in their ocular condition after treatment with cortisone and hydrocortisone.

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Solitary Eosinophilic Granuloma of Bone. J. Bone & Joint Surg. 38B, 545, T. Hunter.

Eosinophilic granuloma of bone may occur as multiple lesions but, more commonly, is manifested as a solitary focus. Eight cases of eosinophilic granuloma of bone are presented. The lesions were located, as follows: in the clavicle, in two; in the humerus, in the tenth rib, in the ilium, in two; in the femur and in the lamina and transverse process of the first thoracic vertebra, in one.

Operative procedures were done in all cases and adequate material removed for biopsy purposes and, in some cases, the contents were curetted away. There were two complications, these being nerve root compression with motor weakness resulting from the collapse of the body of the first thoracic vertebra. The second complication was a pathologic fracture of the clavicle, in one case.

It is probable that complete and spontaneous recovery of this lesion can and does occur with restitution of normal radiographic appearances of the normal bone. The differential diagnosis is quite difficult and usually surgical biopsy is necessary, to establish the diagnosis. Following biopsy, spontaneous recovery ordinarily obtains. Radiotherapy is advised for the few cases which fail to resolve after curettage. (Abstracted by Thomas F. Parrish, M.D., Nashville.)

CASE REPORT

An Unusual Foreign Body In the Esophagus*

Herbert Duncan, M.D.,† Nashville, Tenn.

This case is reported for several reasons. The first is because of the unusual nature of the foreign object, and secondarily because of its location.

It has been the experience of all those who do endoscopy for the removal of foreign bodies to expect the most bizarre objects to be found in the food and airways of their patients. This has certainly been true in my own practice which includes the clinic patients of both Vanderbilt and Nashville General hospitals.

Careful search of the literature of the past five years failed to reveal a case similar to the one I am reporting. There have been cases reported fairly frequently of obstruction due to so-called bulk laxatives but these have been in the lower esophagus and of the large and small gut. The only case reported due to the same substance as in my case was in the J.A.M.A. (April 24, 1937) and it was of a different form.

There have been many bulk laxatives on the market for years However, all of the previous drugs required the taking of two to four tablespoonful of the powder and washing it down with copious amounts of water. Recently, to overcome these objections, the drug companies have been trying to manufacture a tablet form of the former bulk laxatives. The tablet which was involved in my case is "Saraka." It is composed of bassorin (a vegetable mucilage derived from tragacanth and other gums) and the cathartic drug frangula, as well as sodium carboxymethylcellulose, a mineralized plant fiber. It is manufactured by the Union Pharmaceutical Co. of Montclair, N. J. The tablet has only been on the market for three years although the bulk powder has been for sale for twenty years. The company informed me the formula of the tablet has only recently been revised. They did not give the new formula.

When the patient came to my office she brought one of the tablets. It was of the older form and was considerably larger than the new tablet. Unfortunately I have been unable to obtain any of the older tablets but have only the new ones. I have had one of the tablets in water for the past few hours so you can see how it expands and also how it sticks to the glass. The older tablet made about twice the bulk of this tablet. It could not be washed out of the medicine glass but had to be wiped out and this was done with difficulty. Substances such as this tablet will be another source of foreign body obstruction of the esophagus. Also, if this or a similar tablet were aspirated, it would cause death before relief could be obtained.

The following case will illustrate what I have just discussed.

Case Report

Mrs. L. H. D., a white woman, age 28, was seen in my office on November 11, 1954.

Her chief complaint was inability to swallow even liquids. She was rather uncomfortable and in moderate distress.

The onset was after breakfast when she took one of the tablets I have described and it lodged in her throat. She was unable to either swallow the tablet or to dislodge it. The night previously she had taken a similar tablet and it lodged in her throat but she was able to cough it up. (The amusing part of the story was that she told me it was a vitamin tablet.) There had been no previous history of difficulty in swallowing or in choking.

She was seen by her family physician who advised her to forget it as she would be all right.

Examination of the ears, nose and throat were negative except for fairly large tonsils. These were not injected.

Esophagoscopy under local anesthesia was done at Vanderbilt University Hospital. The entire cricopharyngeus was filled with a gummy, tenacious material. This was cleaned out with forceps and a large suction tube. The walls finally had to be wiped clean. Then the cricopharyngeus was found to be entirely normal, as was the esophagus below it.

The patient talked to me two days later and had no complaints. She was able to eat and drink normally.

Summary

(1) A case of upper esophageal obstruction due to a laxative drug is reported.

(2) The potential dangers of this new form of an old drug is reported.

*Read before The Meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 11, 1955, Chattanooga, Tenn.

†From the Department of Otolaryngology, Vanderbilt University School of Medicine and Hospital, Nashville, Tenn.

President's Letter



Dr. Wood

Knoxville, Tennessee
October, 1956

Dr. and Mrs. Joe Smith,
Anywhere,
Tennessee

Dear Dr. and Mrs. Smith:

I am writing you this month as this will be my last opportunity to remind you that you have an obligation to meet shortly as a citizen of this state. This is your duty of voting. I hope you have remembered to register in order to exercise this privilege.

I would not suggest how you should vote. I rejoice with you in the freedom which you possess in the selection of your choice as well as your freedom in exercising your privilege. Many have no such freedoms and I hope that you will show your appreciation of such freedom by exercising this opportunity and perhaps thus insuring not only your professional liberty but perhaps insuring the protection of freedom of the ballot for your descendants.

I doubt that we can always find much difference in the philosophy of some of the candidates for office, but the records of the political aspirants like that of physicians, have the faculty of leaving footprints on the sands that reveal the mental markings of the maker. Ambition for power, for prestige, for money or for the real benefit of the peoples can be readily discerned by observation of past deeds. Intellectual honesty, moral integrity, unpopular voting like many drugs may often be bitter in the taking but more curative for the ill patient than a popular vote or a pleasant tasting placebo.

So may I remind you now of two things:
(1) Get out and vote, and
(2) Study the records.

Sincerely,

R B Wood M.D.

R. B. Wood, M.D.

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OCTOBER, 1956

EDITORIAL

HIATAL HERNIA

Since the syndrome of diaphragmatic esophageal hiatal hernia was clearly described about twenty-five years ago, the condition has been found with increasing frequency. It has been estimated to be one of the most common lesions of the gastrointestinal tract, perhaps second only to duodenal ulcers. It is true that the majority of the patients with this defect have no symptoms as a consequence thereof. It is also true that there is a considerable percentage of patients with hiatal hernia who present severe tests in the differential diagnosis of upper abdominal and chest pain. The sudden death due to coronary thrombosis in a patient with hiatal hernia occurs with sufficient frequency to make the medical attendant a little less sure of his diagnostic position when the symptoms are not classically those of either angina or hernia.

In a recent lecture[1] before a local medical group, four patients with hiatal hernia were presented who suffered severe complications attributable to the hernia. A few months ago Blades and Hall[2] reported their analysis of a group of sixty-six patients with hiatal hernia who had been operated upon. Their ages varied from 32 to 80 years. Twenty-nine of the sixty-six patients were more than 60 years of age. Almost half (32 of 66) had dangerous complications:—esophageal stricture in eight, massive bleeding in twenty-two, carcinoma in aberrant gastric mucosa in one, and perforation of the herniated stomach in one patient. There seemed to be no prophylactic profit from limitation of the diet, or employment of various types of drugs. The operation for correction of the hernia is not now the formidable procedure of twenty years ago. Improvement in methods of administration of anesthesia, newer operative technique particularly the trans-thoracic approach, the availability of antibiotics and blood, have all combined to permit surgical correction where heretofore it would have been extremely hazardous. These improvements were necessary since the average patient is in the older age group where complications are most apt to be met. The authors seem to be convinced that any patient who has such a hernia which is judged to be producing symptoms, should be operated upon, unless there are definite physical factors that make the procedure unsafe.

Although this conclusion may not prove at once to be a popular choice, it does focus attention upon a problem commonly met and requiring judgment in making the proper decision. Therefore, attention to the experiences of others found in the published literature may serve to broaden the diagnostic base of any given physician.

A. W.

★

THE PALMER CLINIC

In the column on *Medical News in Tennessee* is a brief story of cooperation in the American way. The medical profession through its Tennessee Medical Foundation

[1]A. Murray Fisher—Lecture Vanderbilt University School of Medicine, 1956.

[2]Blades, Brian, and Hall, Emmett R.: The Consequences of Neglected Hiatal Hernias, Ann. Surg. 143:822, 1956.

has probably been placed in a new light for many of the 7500 people in Marion and Grundy Counties. It has been the catalyst which set up a chain reaction involving capital, labor, local government, state health agency and a citizenry to carry out a project which redounds to the good of many. Need one conjecture how flat will be their reaction to the not unusual "smear" article or comment in a magazine or in a labor newspaper! This is *public service.* This is an example of an activity in which organized medicine of Tennessee has been a pioneer.

R. H. K.

★

CONFERENCE OF COUNTY MEDICAL OFFICERS

The Executive Secretary and Public Service Director of the Tennessee State Medical Association are to be complimented upon a very successful meeting. The program of selected topics was excellent, interesting, and informative. It gave the representatives of the constituent societies the information they need to answer the questions of the "why" and "how" of relating the individual doctor to the several levels of organized medicine. Representatives of the American Medical Association told of its organization based on democratic principles. They explained its accomplishments in the fields of medical education, approval of hospitals, medical science, protection of the public's health and aid to the individual doctor.

The society officers heard a newspaper man explain the newsman's ideas about medical news and its publicity. Medicolegal problems were discussed. Public service or relations was the subject of a couple of presentations.

This was a program to be repeated for the mutual benefit of the officers of the county medical society, his society's members, and of the Tennessee State Medical Association as a whole.

R. H. K.

Notice

The polls will be open in a few days. We of the United States and other free peoples are a minority of the World's population with the privileges of a free ballot and free speech.

No segment of our population has more at stake in the social and economic pattern of this Country than the medical profession. To many laymen and some doctors this "stake" is in terms of dollars in the doctor's pocket. To most physicians the "stake" is a maintenance of competitive practice and a patient's free choice of his doctor. Only thus can the public be protected against the dry rot of regimented practice.

If you have not registered as yet, it is too late. But if you have registered, do not fail to use your prerogative as a free man. *Go to the polls and vote!* If you do not, you have no license to complain when legislation touches medicine. *The non-voter really does not care.*

Special Item

The following two papers were presented by the Association's Executive Secretary and Public Service Director at the County Medical Society Officers Conference on September 23.

The County Medical Society:— Key to Organized Medicine

Jack Ballentine, Nashville, Tenn.

Your medical organization in the United States is based on the American principal of democracy. Authority passes from the roots up, services from the top down.

Your county medical society and the Tennessee State Medical Association are strong links in the chain of American medical organization.

More than 2500 Doctors of Medicine are members of the 50 component county medical societies which blanket Tennessee's 95 counties.

Through the county society, and its elected representatives to the approximately 100 member state House of Delegates, every doctor member has a voice in the policies

of the Tennessee State Medical Association. By way of the Councilor elected from your district and state officers, each member participates in the administration of the State Association. Through T.S.M.A., each member has a voice in the American Medical Association.

In turn, from the A.M.A., the state association and the physicians' county medical society, each member receives factual information and the services which help him arrive at reasonable decisions and take enlightened action in medical affairs. Upon these, multiplied and merged across the land, rest the hopes of people everywhere for better health administration and improved medical service.

The first and last authority in American medicine, the one whose responsibility cannot be waived or delegated, is the individual member of the county medical society. *That's you!*

Physicians engaged in practice in a county and seeking membership in these organizations are evaluated at the county level as to their training, character, ethics and qualifications by men with whom they are in daily contact, who determine their fitness to become members. This is as it should be, for it is not a task that could be done as well at the state or national level. The individual county member is the proper judge of the future members of this important unit of organized American medicine. The personal contact is lost at a higher level. At present regulations exist in county societies whereby a committee reviews the qualifications and eligibility of each prospective member after the secretary has obtained letters of recommendation from reputable physicians, members of the society in the community in which the new physician resides and practices, and only then is the doctor admitted to active membership.

The secretary of the county society is well aware of the responsibility of this important part of his duties and considers it the most important function of his office. Though he is interested in increasing the membership of the society, he is conscious of the fact that members alone do not make a good organization. The prime function of the county society more than of any higher body is its responsibility in carrying out the ethics of the medical profession, and its maintenance at the highest possible level.

All ethical physicians should belong to their county medical society, their state medical association and the national organization. The county secretary should have information as soon as possible on every physician in his county who is licensed to practice in the state. He should immediately contact this physician who is not a member and acquaint him with the advantages of becoming a part of organized medicine, by joining the county society and state association and to offer him the assistance of his office and that of the society.

The actions of the county society and the conduct of the individual member make relations with the public good or bad. Medicine is judged at the county, not at the state or national level, since the physician's patient sits across the desk from him, and Nashville and Chicago are a long way off. The relationship between physicians and patients determines the quality of medical care. When it is good it is reflected on the whole of organized medicine.

Perhaps the most important factor in the consideration of how a county medical society gets members is found in the reasons why a physician seeks membership. If it is done as a means of fulfilling hospital requirements, to establish eligibility for insurance or for other reasons to the personal advantage of the new member, it defeats the purpose for which medicine is organized and leads to merely numerically larger organizations. Bigness, however, should be measured in terms of the purposes of the organization which are to extend medical knowledge, advance medical science, elevate the standards of medical education, promote friendly intercourse among physicians, and by conducting the affairs of organized medicine to enlighten and direct favorable public opinion toward the whole medical profession. The fulfillment of these purposes should be the desire of each and every member of the Association, and this desire should be practiced in a concrete manner than simply by membership on the rolls of the county society. It is of interest

that of the 1,972 county medical societies in this country over 1,700 have less than 100 members. The county societies are the really important organizations. Their members, as a rule, are much closer to the people they serve and they have a greater opportunity to play an influential part in the life of their community.

The county society through its members should take an active part in all agencies concerned with community welfare and particularly those which have a connection with health. It should promote the formation of every facility that would improve health in the community. It can work with the local health departments in extending public health services. It can stimulate its members to activity in civic clubs, religious organizations, and in the educational fields, and particularly in county, state and national legislation. This is of utmost importance. Individual members can support the community fund or chest by contribution of time or money. Through all these activities the county society can make itself felt in every worth while phase of community life.

The county society should constantly endeavor to improve the quality of medical care in its community, to improve the professional status of its members through scientific meetings, by encouraging qualified younger men to come into an area where they are needed. By these means the general level of medical practice can be consistently improved. Through suitable committees it should adjust differences when they arise between physicians and their patients, and it should make provisions for adequate medical service.

We have just mentioned bringing younger men into a community where needed. When these men are brought into the county medical society, a most important step should be taken by the county society, in a program of indoctrination to familiarize the young physician with the purposes and meaning of organized medicine.

Several county medical societies in this state now have adopted an indoctrination program covering such things as the duties and functions of the county medical society, the state medical association, the American Medical Association, and what is available and required in the way of scientific work. Socio-economic activities in medicine is another broad subject covered. Legislative activities in which medicine is directly involved is another. And above all, the *services* of the county, state and national association is one of tremendous importance. The new physician should also learn of the availability of publications that he can obtain and those to which he is entitled by way of his membership in organized medicine. Your state association and the A.M.A. can help in setting up an indoctrination program for new county society members, if desired.

New physicians and medical students should be acquainted with the existance and purposes of the county medical society at the earliest possible time in their medical careers. Preferably by the men who are already members and with whom they come into daily contact in the hospital or medical school.

The members of the county society should be their support of this important unit of organized medicine, give of their time and effort to protect and build the societies' good name and relationship with the public, make it more and more desirable for every reputable physician practicing medicine in the state of Tennessee to belong to his county medical society.

The young physician who has knowledge of the mechanics of organized medicine through his experience with his county medical society and state medical association, is more likely to be familiar with the ethics of medicine. It is a subject that is discussed in a general way in medical schools, but many of these men and women are not aware of the conduct expected of them in medical practice, because they have had no experience with practical training in this important phase of medicine.

In the coming years the county medical society has both an opportunity and a great responsibility. It should be the medical advisor to civic groups in matters affecting public health. It should see to it that the health department has adequately trained personnel and has sufficient funds to do a good job. It must take a more active, vital role in legislation. The county medical society should be the guiding spirit in such

From the Executive Secretary

ORGANIZATIONAL NEWS

REGISTER AND VOTE
SEE PRESIDENT'S PAGE—EDITORIALS

● PUBLIC LAW 569--THE DEPENDENTS MEDICAL CARE ACT

Special Session of House of Delegates

● The TSMA House of Delegates convened in Nashville on Saturday, September 22nd to hear the details presented relative to Public Law 569, the Dependents Medical Care Act. The purpose of the special meeting of the House was to establish policy, and determine whether or not organized medicine in Tennessee would participate with the Department of Defense in carrying out the provisions of the Dependents Medical Care Act.

Policy Determined

● The details of the Dependents Medical Care Act were presented by Dr. R. B. Wood, President; Dr. R. H. Kampmeier, Secretary-Editor; Dr. Chas. Trabue, Member of the Board of Trustees; Dr. Jas. C. Gardner, Chairman of the Board of Trustees and the Executive Secretary. In addition, Mr. J. C. Forristel, Attorney for the Washington Office of the American Medical Association, presented additional data relative to the act and answered numerous questions from members of the House.

TSMA to Cooperate With Defense Department

● Following the discussion before the House of Delegates, a motion was presented by the President that the Tennessee State Medical Association participate in the Dependents Medical Care Act and carry out provisions of Law 569. The House voted unanimously that the medical profession in Tennessee participate in carrying out the provisions of this Law.

Fee Schedule

● Perhaps the most controversial phase of the problem before the House of Delegates, was acceptance of the fee schedule presented by the Prepaid Insurance Executive Sub-Committee. Dr. James A. Kirtley, Jr., Chairman of the Prepaid Insurance Committee, presented the method in which the fee schedule was established. He pointed out that the Relative Value Schedule developed by the California Medical Association was found to be highly valuable and acceptable. The fee schedule as presented and accepted by the House is not yet in effect since a contract must be negotiated with the Department of Defense and the schedule approved by the House must yet be accepted by the Defense Department. Public Law 569, the Dependents Medical Care Act, goes into effect on December 7, 1956.

Negotiating Agent for Doctors to be TSMA

● The House of Delegates empowered the President of the Association to appoint the person or persons to negotiate the contract with the Department of Defense. The President has named the Chairman of the Board of Trustees and Treasurer, Dr. Jas. C. Gardner of Nashville; Mr. Chas. L. Cornelius, Attorney for the Tennessee State Medical Association, and the Executive Secretary to negotiate the contract.

Fiscal Agent for Administrative Details

● The House selected the Tennessee Hospital Service Association, which is a Blue Shield organization in Tennessee, to

handle the details and administration of the program. The fiscal agent will handle all claims and administrative matters between the dependents and the doctors and make reimbursement to the doctors for fees involved with the caring for the dependents of active duty military personnel.

Prepaid Insurance Committee to Continue Studying Act

● The House adopted a motion that the Prepaid Insurance Committee serve as a continuing study Committee to further study the fee schedule and problems arising from the Dependents Medical Care Act. Since the contract with the Department of Defense is negotiable from year to year, the committee was instructed to study the workings of the act and other matters relative to operation of the law in Tennessee.

What Is the Dependents Medical Care Act?

● The program which is scheduled to become effective December 7th., 1956 defines dependents, and provides uniform benefits for Army, Navy, Air Force, Marine Corp, Coast Guard and Commissioned Corp of Coasts and Geodetic Survey and United States Public Health service. This protection for dependents is designed to make military careers more attractive and thus help to reduce personnel turn-over. Following are the basic provisions of the act:

1. All dependents may be treated in military facilities "subject to availability of space, facilities, and capabilities of the Staff";
2. Spouses and children of active duty personnel are eligible for medical care from private physicians and a private facility under the plan now being formulated;
3. The Secretary of Defense may limit the use of private facilities for spouses and children in areas where military sources are adequate; and
4. Other beneficiaries - such as un-remarried widows and parents-in-law (if the service man is responsible for one half their support) are restricted to care in military facilities on a space available basis.

State and County Society Officers Conference Successful

● The first State Association and County Medical Society Officers Conference to be conducted by the TSMA was held in Nashville on Sunday, September 23rd. Approximately 100 officers of county medical societies and the state medical association were present. Officers of the Woman's Auxiliary to TSMA and county society Auxiliary officers were also present. Those attending the conference were enthusiastic over the program presented. Among other speakers, the Conference heard Dr. Louis A. Buie of Rochester, Minnesota discuss the evolution of the principals of medical ethics and came away with a clearer understanding of the revised code of medical ethics now being studied by the AMA.

The Doubting Doctor

● A new movie just released, entitled "The Doubting Doctor," was shown to members of the Conference. This is an outstanding movie emphasizing the need for membership in organized medicine and the movie can be obtained for showing before county medical societies or groups interested in showing the activities of organized medicine.

Round-Table Discussions

● There were two round-table discussions held during the Conference, which gave an opportunity for all attending to ask questions and obtain more specific information on special problems. Everyone attending the Conference stated their belief that this was one of the outstanding meetings conducted by TSMA. The State and County Medical Society Officers Conference will be continued in the years ahead as a part of the services of the State Medical Association.

Public Service

THE TENNESSEE TEN



—Bill Preston, "The Nashville Tennessean"

Three speakers for the first TSMA medical society officers conference held Sept. 23 at the Andrew Jackson Hotel in Nashville, discuss their parts on the program. Left to right: C. Joseph Stetler, Head of the AMA Law Department; Ben Hale Golden, Assistant Publisher, The Chattanooga Times and Thomas A. Hendricks, Secretary for the AMA Council on Medical Services. More than 90 doctors and auxiliary members attended.

Officers Conference Has Good Attendance

● The first county medical society officers conference sponsored by the Tennessee State Medical Association attracted more than 90 physicians and members of the Woman's Auxiliary. All in all, twenty-two of Tennessee's fifty-two component medical societies were represented at the one-day conference held in the Andrew Jackson Hotel, Sunday, September 23.

Register— And Vote!

Dr. Buie on Ethics

● Heading an empressive list of speakers was Dr. Louis A. Buie from Mayo Clinic, Rochester, Minnesota. Dr. Buie discussed the revised code of medical ethics and explained the whole philosophy behind the ethics of American medicine.

Doctors and Newsmen

● Ben Hale Golden, assistant publisher of The Chattanooga Times, called on the group to work for better relations with newsmen, and urged the adoption of press codes by all county medical societies. He added that his newspaper was

one which would welcome a regular column on current medical problems written by physicians in his newspaper's circulation area. "We are interested in the medical problems which are current around Chattanooga," Golden told the group.

The Basic Eight—Donohue

● Steve Donohue, Assistant Director of Public Relations for AMA urged that county society public service programs be built around a list of eight basic "MUSTS". He said an emergency call system, a speakers bureau, a press code, careful public service indoctrination of new members, mediation committees, and citizenship activities on the part of physicians were vital ingredients for good medical public relations.

See Editorial And President's Page on Voting!

Dr. Burkhart

● Dr. John Burkhart, Chairman of the Knoxville Academy of Medicine's Public Service Committee, called for careful planning in the initiation of public service programs. He said the duties of the physician extend far beyond the treatment of patients, and added that public service work is the privilege and the duty of every doctor of medicine.

Doctors and Law

● C. Joseph Stetler, Head of the AMA Law Department, said liability insurance rates were going up, and added that one could expect to see increasing involvements between doctors and the law, not only in liability and personal injury suits, but in federal legislation as well.

"Public Service" For AMA?

● Thomas A. Hendricks, Secretary for the AMA Council on Medical Services, praised TSMA for combining the two terms "public relations" and "medical service" under the name Public Service. He said the foreseeable future might see AMA follow Tennessee's example with a Public Service Department instead of a Public Relations Department. Hendricks outlined the table of organization of AMA, explaining that policy comes from the membership up to the Board of Trustees, not from the top down.

Are You Registered To Vote?

Dr. Wood Presides with Dr. Baird, Dr. Gardner

● Dr. R. B. Wood, TSMA President, was program master at the conference. He was assisted by Dr. J. Paul Baird, TSMA President-Elect who moderated an afternoon panel discussion, and Dr. James C. Gardner, TSMA Board of Trustees Chairman, who was moderator for the morning panel discussion.

Result: A Better TSMA

● The concensus of opinion as expressed by participants was that the conference was thoroughly worthwhile and should be repeated at regular intervals. The prognosis for a better state organization as a result of conferences such as this one, seems good indeed.

President Compliments TV Series

● Following his departure Sunday for the return trip to Knoxville, Dr. Wood appeared on the final program of the Knoxville Academy of Medicine's summer TV series, "Sun Doctor." He thanked station WTVK for making the time for the series available and complimented the Knoxville Academy of Medicine on behalf of the doctors of Tennessee, for an excellent job in producing the popular TV show.

Registration Deadline, Oct. 17th!

Miss Jenkins, Dr. Kelso, and Dr. Waterhouse

● Appearing on the final program with Dr. Wood were Miss Carol Jenkins, talented daughter of Dr. and Mrs. Harry Jenkins of Knoxville, Dr. H. M. Kelso and Dr. R. G. Waterhouse. Miss Jenkins, a freshman at Vanderbilt University this year, travelled by air to Knoxville to take part in the last show. She has appeared in the series regularly. Topic of the last show was "Dog Bites."

Dr. Zirkle Headed TV Committee

● Dr. Charles A. Zirkle headed the Knoxville Academy of Medicine's Resource Committee for Television, which was responsible for the series.

groups and action. The family doctor to the community must be the county medical society.

I wish to briefly mention the rapid expansion of voluntary prepayment insurance against the cost of hospital medical and surgical care, since this has been one of the striking developments of the past twenty years. At the present time over 100,000,000 people have some type of coverage against hospital cost, 70,000,000 against surgical costs and more than 40,000,000 against medical care in hospitals. These figures are still expanding. It is notable that the highest percentage of coverage is in the highly industrialized states and in the great industrial centers. Coverage has lagged in the smaller towns and rural areas. The county medical society can do a great service by surveying its own area and working out plans to extend to a greater degree the benefits of voluntary prepayment plans in its own community.

Fortunately, in Tennessee, much of this type of work has already been accomplished by your own Tennessee Plan of surgical insurance, underwritten by 38 companies and sponsored by the Tennessee State Medical Association. It now covers two out of every three surgical policies in existence in the state of Tennessee. 1,112,000 persons in this state are now covered under the Tennessee Plan.

★

The Tennessee Ten:— Your Public Service Program

Jesse Ford, Jr., Nashville, Tenn.

The Tennessee Ten—the basis for public service activities in Tennessee—could just as easily be called the Tennessee Ten Thousand. Actually public service programs planned and carried out by your state Public Service Committee cover many broad areas, including education through the press, and when I speak of the press I refer not only to our newspapers, but to magazines, radio and television, as well.

We are all interested in giving the public the right idea, that is to say the correct information, about doctors and medicine. We are anxious to do our part, but the public service program of TSMA generates from the county medical society. It is you, who must make *your* needs known to *us*. We cannot anticipate your troubles for you.

Therefore, I would like to request that each of you make certain that your society, regardless of its size, has a public service committee. That committee should be composed of men who are well indoctrinated in the techniques of press relations, men who are willing to take out a moment to meet representatives of the press and form a working liaison at the community level.

Your society, regardless of its size, should formulate and adopt a press code. The recently adopted press code of the Memphis and Shelby County Medical Society should serve as a guide to your group. Copies of the code are available through my office. Adopt a code and educate your members to its contents. This is your insurance against embarrassment and a "bad press," it is a bond between you and the working press. It is the first step in creating good relations where none, or slip-shod relations, at best, have existed before.

And if you will cooperate with your press by giving them the news while it is still news, by discussing frankly with them confidences that you do not wish to have compromised, you will find your information media willing and eager to come to your aid when public misunderstanding threatens to undermine or destroy the freedom of medical practice.

In order that you may be kept up-to-date on public affairs affecting your profession, and in order that you may be reindoctrinated concerning the values to be gained through sound, active public service, I think you should set one meeting of your society aside annually to be devoted to public issues and legislative reports,—in short, public service.

I was in prep school when the great battle for the freedom of medical practice was closed. But I know something of that terrible conflict. I know of the great awakening that occurred in the medical profession, and I know of the intelligence and the courage displayed in that battle against socialist propaganda. The American Medical Association should be congratulated for the magnificent job it did in stemming the tide during those critical years from 1945

through 1952. It was the A.M.A. which saved medicine. Indeed, organized medicine was the first group to recognize socialism for what it is—on all fronts. It was the A.M.A. which realized that the techniques being used to propagate the lies and the smears against medicine were the same techniques of professional public relations. The terrible weapon of the press was misguiding public opinion. Ruthless pressure groups perpetuated this slander and no answer was forthcoming from medicine. It was the A.M.A. which realized how critical the situation was, and which organized its present Department of Public Relations to seek out the truth and to make the facts known to the public.

When I hear someone remark that there is too much emphasis nowadays on public relations, I'm reminded of those people who contend there's too much emphasis on automobile safety, too much emphasis on world peace, too much emphasis on cancer research, too much emphasis on innoculations for typhoid, tetanus, and polio. Actually public relations is a preventive measure, it is a continuing program based upon careful studies to determine the direction in which an organization or a group should go, and the needs it will have in order to get there safely.

And, then too, public relations is a continuing program in communications. The story in which Steve Donohue, Assistant Director of Public Relations, A.M.A. can interest a national magazine, the TV production that a national hook-up telecasts from a Tennessee Medical School, the editorial that reveals medicine's side of a public issue, none of this, I say, is the result of accident. It is the result of planning and hard work. In short it is the result of good communications between the professional public relations man, who can show the magazine where the story is and arouse the editor's interest, who can talk to the television producer using his own terms, and with an understanding of his wants, who can dig up the facts for the editor and put them across in an acceptable form.

And public relations, like any profession, has a basis in salesmanship. So the public relations man must be able to sell the group he represents on the nature of the good works which their planning and his execution can accomplish. If I had to show you the dramatic difference between doctors and the people who put out mass information to the public, I would write a skit. It would go something like this There's been a minor automobile accident. The police reporter questions the doctor. He wants to know what has happened to the victim.

Doctor: A lot of tissue has been destroyed.

Newsman: Tissue? What can be important about that? So some Kleenex was torn up. What about the guy in the accident? I've got a deadline to meet. Maybe I can dig something up on this guy in the morgue.

Doctor: Morgue? My dear fellow, he's not dead. He's merely had a laceration in the area about the humerus. . . .

Newsman: Did you say humorous? Wow, this is real hot copy. A doc thinks an accident victim is humorous. Tell me more. Did you laugh at him right in the emergency room?

Or, your doctor is asked to appear on television. The perenially harassed producer of the show has this exchange with the doctor. (In TV parlance an "idiot" is a simple teleprompter typed on a long scroll.)

Producer: You'll probably need an idiot, won't you, Doctor?

Doctor: Idiot? Who's an idiot? I just came up here to talk about the Salk vaccine.

Producer: No offense. I thought you were going to talk on polio shots. I thought an idiot might help you keep the facts straight. Just in case you forgot.

Doctor: I've had just about all of this I can stand. I'm a busy man. Idiot indeed!

Producer: You're busy! Do you want the idiot or not?

Doctor: Heavens, no! Leave the poor chap alone. I'm not a psychiatrist, you know.

Producer: Good. We'll use the boom mike and dolly in, you'll see a little red light and then you'll get a point. When you get this, (drawing finger across his throat) cut it off.

Doctor: Will it hurt? Where do I go? Whom shall I see? What dolls?

Producer: Don't worry. The prop girl will take care of you. So long!

Overdrawn? Perhaps it is. But I think many misunderstandings between your profession and the press have just such beginnings. Many times the misquote is not so much a misquote as a basic misunderstanding. Many times your terrifying experience with a medium results from the fact that people working in our information media are busy people, usually working at top speed and with many problems on their minds besides your own. It is here that the professional public relations man can offer guidance and assistance. Here, as well as in the council chamber when a public statement is about to be made.

We wouldn't enter a mule in the Kentucky Derby. I wouldn't call a disc jockey to set my broken leg. You wouldn't think of letting a person with no earthly idea of what it was all about, tinker with your new Cadillac, and try to repair some breakdown in its delicate mechanism. And yet, how many times do we get in trouble when we trust our public service—our public relations, to luck and divine providence, to untrained, unskilled hands, to recklessly conceived plans?

Professional help for your county medical society is as near as the telephone. Pick up the phone and call us. If I do not know the answer, I'll tell you. If I cannot help you I will get someone who can. If you want me on the scene, say so, and I'll be there. After all, the A.M.A. is as near as my telephone, and I have never yet called on them for help and found them wanting in any respect. This service, all these services, are paid for by your dues. And I might add that you get more for your public service dollar here in Tennessee than any other state medical association I know of! Why not make wise use of your public service program and your public service facilities?

Of course, anyone will tell you that if you don't play, you can't win. So get in the game by appointing your public service committee. Get your society on the team by adopting a press code. Find out what's going on, keep up-to-date, and enjoy the self-confidence and the assurance that goes with good public relations.

I could regale you all afternoon with the accomplishments of the public service program this year. I could catalogue our national magazine relations which Steve Donohue has helped us with so magnificently, I could tell about the national telecasts we are getting in Tennessee, one already this spring, and another to come later this fall, I could talk about our state TV program and the very fine series we have had in Jackson, the wonderful work that's being done by Les Adams in Memphis, the Sun Doctor series which winds up this week in Knoxville, and the sustaining weekly program for Middle Tennessee, live since last April on WSM's Noon Show, which incidentally, has just been confirmed for 1957. I could talk about the large scale campaign for an increased appropriation for our state's indigent hospital service program, now underway. I could discuss "Battle Against Death," the first documentary motion picture ever produced by the Tennessee State Medical Association, scheduled for release within the next three weeks, and designed to tell the story of indigent hospitalization in this state. I could mention the national attention our Auxiliary Health Project Contest is getting, the Tennessee Medical Foundation, our doctor placement service, our fortnightly newsletter for Public Service committeemen, and our editorial campaign for medical education week next Spring. I could talk about the State Legislature, slated to convene January 2nd, and many other things, but I will, I must, forego this. I will limit myself to what I believe to be one of the most significant public service accomplishments made by the Tennessee State Medical Association to date.

I refer to our Tennessee Medical Press Award. Rules for the Award are available through my office. The Award was recommended last year by the Public Service Committee and approved by the Board of Trustees. The purpose is to encourage good medical news reporting and to develop reporters who are skilled in telling the story of medicine, its triumphs, its hopes, its human interest and its heroism, as well as its scientific advances and its progress in medical education. The results in this first year of the Award have been splendid, and we have been rewarded beyond our great-

est expectations in these past few months. Your Board Members, ten outstanding news editors and publishers. and five physician members of the Tennessee State Medical Association, are doing a fine job in spreading the word about the Award among members of the working press. The by-product of this Award, of course, is a closer relationship between doctors and newsmen, something which has been needed for many years. Watch your newspapers for the announcement of the recipient of the Award next January. You can be proud of this Award. You can rest assured that it is developing a core of skilled medical news writers in your state. (Mr. Ben Golden, of the *Chattanooga Times*, who is with us today, is a member of this Board.) May I urge each of you to familiarize yourself with the rules of this Award and to let your medical society know that a positive program for improved medical news reporting is underway, *and* is getting results.

In conclusion, I want to urge you once again to get a public service committee appointed for your society and to send me the names of the doctors on that committee. May I urge that you formulate and adopt, through that committee, a press code. And finally, consider the good that can come from devoting one medical society meeting each year to public service. By all means, write or call me when you need me. That is what I'm here for, that is why your public service committee has given me this wonderful opportunity to work with you. I hope I'll have an opportunity to see you all together here next year, and I hope to see you each and every one individually during the coming months.

DEATHS

Dr. John Owsley Manier, 69, Nashville, died September 1 at his home, after a prolonged illness which followed a stroke. His contributions to organized medicine were many. He served as secretary and later, in 1928, as President of the Nashville Academy of Medicine and Davidson County Medical Society. He was President of of the Tennessee State Medical Association in 1934, having been its treasurer and Chairman of the Board of Trustees from 1922 to 1934. Dr. Manier was one of the founders of the Public Service Program adopted by the Tennessee State Medical Association, and supported it with great enthusiasm.

Dr. Jacob S. Sharp, 78, LaFollette, died on August 25 at his home.

Dr. William E. Howell, 76, Morristown, died August 29, at his home.

Dr. John Erwin Hampton, 78, Newport, died on September 2 following an illness of several months.

Dr. Claude P. Fox, 62, Greeneville, died on August 19.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Sullivan-Johnson County Medical Society

The September meeting was held at the General Shelby Hotel in Bristol, September 13. Dr. Jack Cruchfield, Department of Medicine, Bowman Gray School of Medicine, Winston-Salem, North Carolina, gave a most interesting and well received talk on "Surgery in Cardiac Patients."

Nashville Academy of Medicine and Davidson County Medical Society

The Nashville Academy of Medicine began its fall meetings with a dinner at Thayers Veterans Administration Hospital on September 11. The scientific program consisted of a film and discussion presented by Dr. Eugene Regen and the VA Hospital staff on the subject of "Flexion Exercises for Low Back Mechanical Disorders."

Roane County Medical Society

The Society met on September 25 in the Oak Ridge Hospital. The scientific program was presented by Dr. W. E. Smith, Knoxville and Dr. Paul Spray, Oak Ridge. Their subject was "Intervertebral Disc Syndrome."

Chattanooga-Hamilton County Medical Society

The September 7th meeting of the Society was held on the occasion of the President's Dinner at the Lookout Mountain Fairyland Club. The guest speaker was Dr. James D. Rives, Professor of Surgery, Louisiana State University Medical School at New Orleans. The subject of his paper was "Acute Obstructions of the Small Intestines."

Memphis-Shelby County Medical Society

The Society met on August 7. The scientific program consisted of:—"An Epidemic of Syphilis in a School: Its Detection and Control," by Dr. Carl E. Hookings; "Mumps, Myocarditis, with Review of the Literature," by Dr. Glenn E. Horton; "Uretero-ureteral Anastomosis," by Dr. Raymond F. Mayer; and "Hereditary Congenital Ophthalmoplegia," by Dr. Philip M. Lewis.

Knoxville Academy of Medicine

The Society conducted its meeting in the Knoxville Academy of Medicine Building on September 11. The program consisted of an interesting case report presented by Dr. George E. Murray. Dr. Jack Chesney spoke to the members on the subject of "Changing Mortality in Pediatric Patients." The discussion was led by Dr. Richard B. Willingham.

Consolidated Medical Assembly

The Assembly of West Tennessee met in the New Southern Hotel in Jackson on September 4th. Dr. R. N. Buchanan of Nashville was the guest speaker, his subject being "Some Recent Advances in Dermatologic Mycology." Dr. R. H. Hutcheson, State Commissioner of Health, spoke on "Plans for an Integrated Hospital System."

Robertson County Medical Society

The Society resumed its regular meeting season on September 19 by meeting in the hospital in Springfield. Dr. Gordan Peerman of Nashville, the guest speaker, discussed "Cancer of the Cervix."

Hamblen County Medical Society

The Society met on August 4 in Morristown. The program consisted of representatives of the insurance carriers and local furniture factories who were invited for a frank discussion of insurance and associated medical and surgical fees.

At the meeting of the group, a variety of misunderstandings were cleared up and a closer meeting of the minds was accomplished for the medical and insurance representatives. Society officers stated that the meeting was a step forward in lay-physician relationships.

NATIONAL NEWS

The Month in Washington

Regardless of which party organizes the next Congress or who occupies the White House, health and welfare legislation promises to take up considerable time and attention of lawmakers. There is nothing to indicate that the general subject of health has lost its appeal either to the public in general or to men who run for political office in particular.

The national platforms on which the candidates of both parties have been campaigning are somewhat of a blueprint for the type of legislation to come in the 85th Congress, convening next January 3; generally, both parties advocate more rather than less federal participation in health and welfare programs. Here are some of the points in the two platforms:

Aid to Medical Schools. The Republicans recommend "federal assistance to help build facilities to train more physicians and scientists" as a supplement to action of the 84th Congress authorizing federal grants to schools and other groups for laboratory research facilities. The Democrats state: "We pledge ourselves to initiate programs of federal financial aid, without federal controls, for medical education."

Aid to Hospital Construction. The Republican plank: "Republican leadership has enlarged federal assistance for construction of hospitals." The Democratic plank: "We pledge continuing and increased support for hospital construction programs."

Medical Research. Republicans: "We have asked the largest increase in research funds ever sought in one year to intensify attacks on cancer, mental illness, heart diseases and other dread diseases." Democrats: "We shall continue to support vigorously all efforts, both public and private, to wage relentless war on diseases—We commend the Democratic party for its leadership in obtaining greater Congressional authorizations in this field."

Vocational Rehabilitation. Republicans: "We have fully resolved to continue our steady gains in man's unending struggle against disease and disability." Democrats: "We pledge support to a vastly expanded rehabilitation program for these physically handicapped, including increased aid to states."

Medical Care. Republicans: "We have encouraged a notable expansion and improvement of voluntary health insurance, and urge that reinsurance and pooling arrangements be authorized to speed this progress." Democrats: "We pledge . . . increased federal aid to public health services, particularly in rural areas."

Social Security. Republicans: "We shall continue to seek extension and perfection of a sound social security system." Democrats: "By lowering

the retirement age for women and for disabled persons, the Democratic 84th Congress pioneered two great advances in social security. . . . We shall continue our efforts to broaden and strengthen this program by increasing benefits to keep pace with improving standards of living, by raising the wage base upon which benefits depend and by increasing benefits for each year of covered employment." (A.M.A. Washington Letter.)

Health Insurance Coverage in U. S. At All-Time High

Benefit payments designed to help people pay hospital and doctor bills are running 20 per cent higher this year than last, according to the Health Insurance Council. As of July 31, 1956, the Council estimates that 110 million persons were covered by hospital insurance; 94 million had surgical protection; 58 million had regular medical expense coverage, and seven million were insured against major hospital and medical expenses.

Some highlights of the survey as of the end of 1955 are:

(1) Number of persons insured against hospital expenses increased by 6.1 per cent; surgical insurance up 7 per cent; regular medical expense insurance gained 17.5 per cent; major hospital and medical expense insurance increased 134.5 per cent.

(2) Benefits for hospital expense still occupied top spot in American health insurance program—59,645,000 persons held policies from insurance companies; 50,726,000 enrolled, by Blue Cross-Blue Shield; 4,530,000 covered by miscellaneous plans.

(3) Growing public awareness of the cost of catastrophic illness prompted the sharp rise in the number of persons covered by major hospital and medical expense insurance. Of the 5,241,000 persons covered at the end of 1955, 4,759,000 had protection through their place of employment while 482,000 were insured through individual and family plans.

(4) Protection to help meet the expense of surgical care was provided by private insurance companies to 56,645,000 persons; by Blue Shield-Blue Cross plans to 39,165,000 and by other types of plans to 4,340,000.

Hospital Statistics

United States hospitals cared for 21,072,521 patients in 1955, more than in any previous year, according to the American Hospital Association. This was an increase of 727,090 over 1954's total of 20,345,431.

A total of 3,476,753 babies were born in U. S. hospitals last year, a rise of 134,154 over the 1954 total of 3,342,599 hospital births.

On any day in 1955, there was an average of 1,363,024 patients and 49,467 newborn infants in U. S. Hospitals.

In 1955, the AHA reported, United States hospitals spent $5,594,304,000 to care for these patients and newborn infants compared with $5,229,040,000 in 1954, an increase of $365 million.

A steady rise in hospital admissions has taken place since 1946, the year in which the American Hospital Association began its statistical series. The 1955 statistics were published in Part II of the annual Guide Issue of Hospitals, Journal of the Association. The information was gathered from questionnaires answered by 6,956 hospitals in the country.

MEDICAL NEWS IN TENNESSEE

Palmer Clinic



The dedication of the Palmer Clinic, Inc., on September 3, was an event of significance, the culmination of two years of planning and the combined efforts of the local citizenry, the County Court, the medical profession of Tennessee through the Tennessee Medical Foundation, the Tennessee Department of Public Health, the Tennessee Consolidated Coal Company and the U.M.W.A. Welfare and Retirement Fund.

The Clinic will offer a medical facility in an area of 300 square miles with a population of 7,500, some of whom were quite distant from medical care.

Upon a request for assistance the Tennessee Medical Foundation made a medical and dental survey, assisted and advised in the organization of a building committee along with representatives of certain of the above agencies and doctors of Marion and Grundy counties.

Every avenue was thoroughly explored which would enable the community to bring the clinic into existence: the coal company agreed to donate a plot of ground as a building site, clear the land, and use their purchasing power to secure building ma-

terials at a discount; over $3,000 was pledged by local citizens; men in the community offered to donate labor; truck owners volunteered to haul gravel, sand and building materials; the town was incorporated in order that sales tax turnback money could help defray the cost of construction; the County Court appropriated $2,000 toward the building; timber was cut from land owned by the coal company with the help of free labor. Over $10,000 was secured through the sale of bonds. A large number of coal miners offered to have a contribution made from their wages each month for one year. The coordinated effort has culminated in a clinic building, 40 by 80 feet, of block construction veneered with brick and pine paneled interior. There are four examining rooms, modern X-ray and laboratory facilities, an emergency room, waiting room and business office. At a later date the full basement will be completed and offices established for dental service.

The present staff consists of one doctor, a registered nurse, laboratory and X-ray technicians. In January a second doctor, who is now completing an internship, will join the medical group. The Foundation has been asked for assistance in arranging for regularly scheduled consultant visits to the clinic to help meet the need for good diagnostic and therapeutic services.

University of Tennessee College of Medicine

A grant of $9,720 has been awarded to establish a special training program in the field of rheumatology. The award was made by the Institute of Arthritis and Metabolic Diseases of the United States Public Health Service.

Vanderbilt University School of Medicine

Dr. Grant W. Liddle has joined the faculty of the Department of Medicine as Associate Professor. He comes from the National Institutes of Health, Bethesda, Maryland, where he has been doing research in endocrinology.

★

The National Institute of Arthritis and Metabolic Diseases has made a grant of $6,480, as a graduate training grant in the field of arthritis.

★

A postgraduate Pediatric Day by the Department of Pediatrics as described under Announcements (page 369) will be held on November 1. This is open to all physicians.

Cardiac Work Evaluation Clinic to Open

Under the auspices of the Middle Tennessee Heart Association, a Cardiac Work Evaluation Clinic will be opened at Vanderbilt University Hospital shortly. The purpose of the Clinic will be to evaluate the work capacity of persons with employment problems due to cardiac disability, and its facilities will be available to the doctors and cardiacs of the entire Middle Tennessee Area. It will be conducted weekly as a sub-division of the general cardiac clinic already in operation at the Hospital, and the Social Service Department and Vocational Rehabilitation Unit there will cooperate in its operation.

Heart Disease Continues As Leading Cause of Deaths in State

A report released by the State Health Department has revealed that heart disease continues to lead all other causes of death in Tennessee for the first six months of 1956. According to Dr. Laurence A. Grossman, President of the Middle Tennessee Heart Association, heart disease was not only the number one killer but it had accounted for more than twice as many deaths as cancer, the second principal cause. The other causes of death in order were: vascular lesions, accidents, diseases of early infancy, influenza and pneumonia and arteriosclerosis. In making these statistics known, it was pointed out that constant strides are being made in the control of heart disease and that many persons are living today as a result of the advances made in surgical techniques and treatment in recent years.

Acuff Clinic

The National Heart Institute of the National Institute of Health has awarded a two year $25,000 research grant to Dr. E. Converse Peirce, II, of the Department of Surgery, Acuff Clinic, Knoxville. Dr. C. Harwell Dabbs is listed as collaborating investigator and Dr. P. M. Huggin as admin-

istrator of the funds, to be expended through the East Tennessee Tuberculosis Hospital, of which Dr. Huggin is Medical Director. The funds will be used to advance further research in cardiovascular surgery using differential hypothermia combined with a pump-oxygenator for open cardiac surgery.

PERSONAL NEWS

Dr. F. Tremaine Billings, Nashville, has been elected to the Board of Trust of Princeton University.

Dr. S. B. Sullenberger, Dandridge, has been elected President of the National Flying Physicians Association.

Dr. Bruce H. Sisler, Gatlinburg, recently addressed the Rockwood Rotary Club.

Dr. James G. Hughes, Memphis, is one of the founding members of the newly organized National Council on Infant and Child Care.

Dr. R. G. Fish, Paris, was elected Chief of Staff of the Henry County General Hospital.

Dr. Horace McSwain was named Vice-Chief, **Dr. John E. Neumann**, Secretary and **Dr. E. P. Mobley** and **Dr. K. G. Ross** as members of the executive committee.

Dr. John C. Thornton, Brownsville, has been awarded a plaque by the Brownsville Rotary Club in recognition of his 44 years as a doctor in Haywood County.

Dr. Augustus McCravey, Chattanooga, recently spoke to the Memorial Hospital Auxiliary.

Dr. Samuel L. Raines, Memphis, addressed the dietetic intern graduates at Kennedy Veterans Hospital in Memphis.

Dr. Merrill F. Nelson, Chattanooga, discussed "Rheumatic Heart Disease" on the weekly "Your Doctor Speaking" television program.

Dr. Gilbert Eblen, Knoxville, recently attended the Eighth International Congress of Pediatrics in Denmark.

Dr. Merlin L. Trumbull, **Dr. William Tribby** and **Dr. Harold A. Sparr**, all of Memphis, recently attended the meeting of the American Association of Blood Banks, in Boston.

Dr. William Hardy, Oak Ridge, has returned from service in the United States Navy and resumed his practice at Oak Ridge Hospital.

Dr. William W. Hurteau, Memphis, is leaving the St. Joseph Hospital to become associated with the Methodist Hospital in Indianapolis.

Dr. J. Spencer Speed, Memphis, addressed the Rotary Club in Memphis. His subject was "Orthopaedic Surgery."

Dr. H. D. Gray, Memphis, is the founder of the new "Doctors Fund" at the University of Tennessee College of Medicine.

Dr. William K. Swann, Knoxville, was the recent speaker before the Mended Hearts Club at the Baptist Hospital in Knoxville.

Dr. L. Spires Whitaker, Chattanooga, will open his office for the practice of thoracic and chest surgery.

Dr. James A. Payne, formerly of Louisville, Kentucky, has announced his association for the practice of medicine with **Dr. William W. Shacklett** at Murfreesboro.

Dr. Dan M. Thomas, Oak Ridge, was the recent speaker before the Maternal Education Group.

Dr. Paul Johnson, Jr., announced the opening of his office in the Medical Arts Building, Chattanooga, for the practice of obstetrics and gynecology.

Dr. William K. Howard has opened his office in the Medical Arts Building, Nashville, for the practice of pediatrics.

Dr. James E. Goldsberry, Nashville, has announced the opening of his office at 3106 Belmont Boulevard.

BOOK REVIEW

The Morphology of Human Blood Cells. By Doctor R. W. Diggs. 181 pages, 31 color plates, 54 figures. W. B. Saunders Company, Philadelphia, 1956. Price $12.00

Dr. R. W. Diggs and Dr. Ann Bell, along with the artistic talents of Miss Dorothy Sturm, have produced in this monograph, one of the finest atlases of human blood cells currently available. The reproduction of blood cells either by photomicrograph technique, or by water colors, has always been technically difficult and generally unsatisfactory. In the series of plates reproduced in this monograph, there may be found the finest reproductions of normal and abnormal cells that this reviewer has seen. The majority of the plates are water-color reproductions. However, several photomicrographs, both in color and black and white, are included. There is a very excellent discussion of the normal and abnormal cellular elements, including a chapter on blood techniques and methods which is entirely satisfactory. The monograph is ring-bound, skillfully printed, and more than adequate in its presentation. The authors and publisher are to be commended for their efforts in producing a descriptive atlas which should find a large demand among physicians and medical students, as well as technicians and those interested in the general subject of cellular morphology.

CHARLES THORNE, M.D.

Epilepsy and the Law. By Roscoe L. Barrow, Dean, University of Cincinnati College of Law; and Howard D. Fabing, M.D., 147 pages. New York: Paul E. Hoeber, Inc., 1956. Price $5.50.

This volume contains the answers to many questions regarding the legal status of the epileptic

patient in the United States. The statutes of the various states as they relate to marriage, workmen's compensation and other laws which are concerned with the epileptic, are analyzed and constructively criticized in the light of recent advances in the medical control of seizures. The authors point out that many of these laws have become archaiac and unjustly penalize the patient with epilepsy. They indicate the changes which are necessary and point out the steps which must be taken to achieve adequate legal reform.

This book will be of great usefulness to all physicians and administrators who deal with the epileptic. It is highly recommended. The authors and the publisher deserve considerable credit for the publication of this volume.

B. E. Sprofkin, M.D.

ANNOUNCEMENTS

Pediatric Day

The Pediatric Department at Vanderbilt University School of Medicine announces another Postgraduate Day for Thursday, November 1, to be held at Vanderbilt University Hospital. Pediatric concepts which have been clarified in the last few years will be discussed as well as other recent advances in prevention and therapy will be presented. Interesting clinical material on the Ward at the time will be presented. Five hours of credit for the participants has been certified by the American Academy of General Practice. A $5.00 registration fee will be charged to cover the expenses of mailing, mimeographing and for a buffet luncheon which will be served in the Hospital Dining Room. For further information please contact Dr. Amos Christie, Professor of Pediatrics, Vanderbilt University Hospital.

Medical Symposium to Be Held in Asheville, North Carolina

The Tenth District Medical Society will conduct a symposium in Asheville, North Carolina on October 17, 1956, at the Memorial Mission Hospital and Medical Library. Surgical operative clinics will be presented from 8:00 to 10:00 a.m. Entertainment for ladies will be provided by the Buncombe County Medical Auxiliary. This meeting may be of particular interest to physicians residing in the eastern part of Tennessee. For further information, contact Dr. Theodore S. Raiford, Secretary, Tenth District Medical Society, 607 Flatiron Building, Asheville, North Carolina.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Department, 112 Louise Ave., Nashville 5, Tenn.

Locations Wanted

A 29 year old married physician, Methodist. Graduate University of Louisville. Now interning. Desires general practice, assistant or associate. Available now. LW-227

◆

A 27 year old married physician. Graduate University of Maryland. Now interning. Desires general practice, clinical, assistant or associate. Available now. LW-229

◆

A 36 year old married physician, Protestant. Graduate George Washington University. Taken Part I American Board of Surgery. Desires general practice with surgery, clinic, assistant, associate or industrial in community 3,000 to 300,000. Available now. LW-230

◆

A 37 year old married physician, Lutheran. Graduate University of Tennessee. Now interning. Desires general practice in any sized community in Middle Tennessee. Available now. LW-231

◆

A 34 year old married physician, Presbyterian. Graduate University of Tennessee. Board eligible in Surgery. Desires general practice with surgery. Available now. LW-233

◆

A 29 year old married physician, Baptist. Graduate Medical College of Virginia. Three years residency in Internal Medicine. Desires practice in any sized community in Internal Medicine. Available now. LW-234

◆

A 33 year old married physician, Methodist. Graduate Duke University. Board eligible in Surgery. Desires surgical practice, clinical, assistant or associate. Available now. LW-236

◆

A 31 year old single physician, Protestant. Graduate University of Virginia. Board eligible in Surgery, Sept. Priority IV. Desires surgical practice in community 15,000-50,000 in West Tennessee. Available now. LW-237

◆

A 33 year old married physician, Catholic. Graduate Tulane University. Priority IV. In fourth year of surgical residency. Board eligible. Desires surgical practice, clinic, assistant or associate. Available now. LW-238

◆

A 32 year old married physician, Catholic. Graduate State University of New York. Now completing third year of residency in Internal Medicine. Priority IV. Desires clinic, assistant or associate practice in Internal Medicine. Available February, 1957. LW-239

◆

A 26 year old married physician, Methodist. Graduate University of Tennessee. Currently on active duty with Air Force as Flight Surgeon. Prefers pediatric practice. Available February, 1957. LW-240

◆

A 35 year old, Board eligible surgeon desires association with individual or group. Will consider some general practice. Available immediately. LW-241

◆

A female roentgenologist is seeking to service several small hospitals. Protestant. Licensed in Tennessee. Available immediately. LW-242

◆

A 30 year old married physician, Methodist. Graduate University of Tennessee. Priority IV. Prefers general practice with surgery in community of 10,000 or less, clinical, assistant or associate in West Tennessee. Available about January. LW-243

◆

Physicians Wanted

Excellent opportunity: Physician to take over general practice with surgery if desired, in town of 4,500 population. Located northwest Tennessee. PW-61

◆

Wanted: an associate, in general practice in clinic with two other physicians. Middle Tennessee. Will guarantee a generous income from the start. Do not need to buy equipment. PW-65

◆

Small town in West Tennessee desires general practitioner. No other physician in community. All efforts will be made to cooperate with physician in setting up his practice. PW-67

◆

Physician in town of 2,500 population desires another physician to go into practice with him. Small hospital, wants man to work toward partnership. Good opportunity. PW-71

◆

Town of 1,000 population in West Tennessee desires general practitioner to take over practice of deceased physician. Office space and all equipment already available. PW-73

◆

Wanted: Physician to work as full-time examiner, some psychiatric training necessary, nice working conditions, good salary, all equipment furnished, 40 hours a week with 30 days annual leave and 15 days sick leave a year. East Tennessee. PW-76

◆

Town of 2,000 population in East Tennessee desires general practitioner. Temporary office space available while clinic is being built. Community physician left to take further training. PW-78

Journal of the Tennessee State Medical Association

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It is very important that the clinician be aware of the frequency of peptic ulcer in the elderly. Both symptoms and complications of ulcer must be kept in mind in evaluating the complaints of the aged.

PEPTIC ULCER OF THE AGED

L. I. GOLDSMITH, M.D.,† Memphis, Tenn.

The great increase in the number of persons who live past the age of sixty years has resulted in considerable interest in the incidence and problems relating to the diagnosis and treatment of peptic ulcer in this age group. In 1948, 12 per cent of the white population of the United States was 60 years of age or more, while fifty years ago, 6.6 per cent attained this age. It is now recognized that peptic ulcer is no longer to be considered a disease of young and middle-aged persons, but rather as one which not only may continue to cause symptoms and produce dangerous complications in the aged, but also one which frequently has its onset in persons past 60 years of age.

In 1940, Mulsow[1] collected 4,079 cases of peptic ulcer reported by various authors, and found that 10.5 per cent occurred in persons 60 years of age or older. In the report by Rafsky and associates,[2] there were 1,800 hospital admissions for peptic ulcer, and of this group, 22.2 per cent had attained the age of 60 years. At the same time, Mulsow[1] tabulated 2,498 medically treated cases of ulcer, and reported an average occurrence of 22.9 per cent in persons over 60 years of age. Of more significance is the fact that 44.2 per cent of the deaths from peptic ulcer were in patients older than 60 years.

Another misconception, which recent reports have dispelled, is that peptic ulcer in an aged person represents a continuation of a chronic process which had its onset during youth. In 1941, Klingenstein[3] found that in approximately half of a group of 173 patients with gastroduodenal ulcer, no symptoms had occurred until 50 years of age or more, and that a large number of gastric and duodenal ulcers first became evident when the patients were between the ages of 60 and 70 years. Levin, Kirsner and Palmer[4] reported that 10 per cent of their cases of benign gastric ulcer occurred in patients past 65 years of age. Kiefer and McKell[5] found that in half of their series of 152 patients over 65 years, peptic ulcer had its onset after they had passed their sixtieth birthday, and approximately one-sixth had their first symptom after reaching their seventieth birthday.

Meyer and Saphir[6] refer to the possibility that aged persons may forget the history of previous gastrointestinal symptoms, but they point out that at autopsy it is not unusual to find an acute gastric or duodenal ulcer together with a healed chronic gastric or duodenal ulcer. The report of Boles and Dunbar[7] reveals that in 4,000 autopsies at the Philadelphia General Hospital, there were 97 cases of peptic ulcer in patients past 60 years. In only 10 per cent of these 97 cases was a diagnosis of ulcer made, and all of this group had a hemorrhage or perforation which called attention to the presence of an ulcer.

Etiology

Emphasis has been placed on the incidence of gastric anacidity with advancing age. Such an observation has resulted in a tendency to consider the likelihood of peptic ulcer in older persons to be rather remote. However, studies show that there is a high occurrence of hyperchlorhydria in the aged, and a special study of the gastric secretory response in 47 healthy persons over the age of 65 revealed that, from the standpoint of

†From the Bnai Brith Home and Hospital, Memphis, Tenn.

the ability of these older persons to secrete hydrochloric acid, the stomach and duodenum may be regarded as fertile fields for the development of peptic ulcer.

Furthermore, Palmer[7] showed that psychic factors are also prominent in older people. Economic dependency, the feeling of being no longer wanted or needed, the loss of marital partnership, the loss of interest by the world in general in older people, the threat of failing health, and rebellion against the acceptance of the dependence produced by age are all considered to be of importance in their psychogenic relationship to the etiology of peptic ulcer in the aged.

Boles[8] is inclined to regard the increasing incidence of ulcer in old groups as the "result of the progressive development of vascular disease of various types."

The prolonged use of indwelling tubes seems to be an important factor in the development of many peptic ulcers in the aged. Frequently, such ulcers have been found to be perforated. Of 16 patients with recent acute peptic ulcer in the sixth and later decades cited by Meyer and Saphir,[6] 9 had been intubated for various lengths of time.

An acute peptic ulcer may be found at autopsy in elderly patients who died of an acute febrile disease, or in congestive heart failure, or who died after operations for biliary tract disease, for carcinoma of the stomach, and for disease of the prostate gland. Postoperative shock due to hemorrhage from an acute ulcer may erroneously be attributed to the operative procedure.

Diagnosis

Elderly patients with peptic ulcer fall into three classes: (1) those in whom the disease is a continuation of a chronic process; (2) those whose first symptoms occur at an advanced age; and (3) those who apply for treatment for some other condition, and a peptic ulcer is discovered incidentally.

The manifestations of peptic ulcer are different in the aged. Fear of a change in their customary way of living may lead them to deny symptoms, and too, they may have a faulty recollection of symptoms. Of 41 patients over the age of 65 with benign gastric ulcer, Levin, Kirsner and Palmer[4] found there was no relationship of pain to meals, and the pain was made worse by food in 11 patients. In this same series, nausea, vomiting and anorexia were frequently present, and a history of tarry stools was elicited from 18 patients, 12 of whom also had hematemesis.

In an analysis of 152 patients with peptic ulcer over the age of 65 years, Kiefer and McKell[5] found that only 69 patients gave a characteristic history. Atypical symptom complexes were frequent and occurred in patients with chronic complicated ulcers, and in those with brief histories of ulcer. Nine per cent of all patients with active duodenal ulcers had tenderness in the right upper quadrant. Twelve patients with gastric and 18 with duodenal ulcer gave a history that was typical of malignant disease of the stomach, including such symptoms as pain, vomiting, anorexia, and loss of weight.

It has been claimed that the symptoms of peptic ulcer are usually milder in the older group, especially when the ulcer starts after 50 years of age. Hence, it is the complications of ulcer which often cause the older patient to seek care.

A gastric lesion when diagnosed in the aged is more likely to be malignant. Perforation is more likely to occur than hemorrhage in the mature adult. Seventy-three per cent of perforations occur between 20 and 50 years of age. The frequency of and mortality from hemorrhage increases after the age of 40. Complications other than hemorrhage occur more frequently in the aged. Thirty-three of 112 patients with duodenal ulcer in Kiefer and McKell's[5] series had evidence of chronic obstruction.

In an aged person, the differentiation between an acute episode due to coronary artery disease or to a peptic ulcer, or to the simultaneous occurrence of both in the same patient, may be difficult.

The physical examination of aged patients with peptic ulcer is of little significance so far as the diagnosis of peptic ulcer is concerned. Other diseases, such as cirrhosis of the liver, are frequently found in the older patient with an ulcer. Hematemesis and melena in a cirrhotic patient may be due to a bleeding peptic ulcer, rather than from esophageal or gastric varices.

Levin[1] and his group have found that the rate of healing of a gastric ulcer crater in the aged is slower than in the young. The time required for healing in their cases was from two and one-half weeks to twenty-six months. Thus, persistence of an ulcer for six to eight weeks does not necessarily signify malignancy. The same authors emphasize that benign gastric ulcers commonly recur at the same site. They were able to observe 6 patients with gastric ulcer for more than ten years after all had reached the age of 65 years. All had ulcer recurrences from two to nine in number, but none had evidence of malignant degeneration. X-ray and gastroscopic examinations are necessary and helpful in establishing the diagnosis of ulcer in any patient. The difficulties of an exact differential diagnosis in aged persons were noted by Levin[1] and his group when they found that in 6 of 41 cases of benign gastric ulcer, a resection had to be done to establish the diagnosis.

In the case of duodenal ulcer, upper gastrointestinal series of elderly patients with a prolonged history usually shows marked deformity of the bulb with or without a crater.

Gastroscopic examination may be done in the older patient, although certain contraindications, such as obstruction of the esophagus, or of the cardia, aneurysm of the aorta, mediastinal tumors, and esophageal varices, may be present.

Of interest is the fact that in a series of over 2,200 cases of proved peptic ulcer, Palmer and Nutter[9] found no case with complete and persistent achlorhydria. Kahn[10] did not find a single ulcer in 840 consecutive cases of pernicious anemia. Moreover, Washburn and Rozendaal[11] found no instance of ulcer in 906 patients with pernicious anemia. However, in a study of 440 patients with pernicious anemia, Murphy and Howard[12] reported four cases in which an X-ray diagnosis of duodenal ulcer was made, but no evidence that any of the ulcers were active could be found. It seems possible that a patient with a deformed bulb may have pernicious anemia, or histamine anacidity with advancing age.

Medical Treatment

The objectives in the treatment of an ulcer in an elderly patient are the same as those in a younger person. However, the presence of associated gastrointestinal conditions, such as hiatus hernia, gallbladder disease, and diverticulitis of the colon may require some adjustment of the diet. Many elderly patients do not tolerate the frequent feedings of milk and cream, and this group requires the substitution of plain milk or protein hydrolysates. Moreover, if there is a familial or clinical evidence of atherosclerosis, foods with high cholesterol must be omitted. Vitamin supplements are necessary in most elderly patients.

Certain precautions in regard to the use of drugs must be observed. For example, very small doses of belladonna may precipitate an acute glaucoma. Soluble alkalis must not be used by patients with impaired renal function since an alkalosis may develop. The aluminum hydroxide preparations alone are preferable, since the addition of magnesium trisilicate to the aluminum hydroxide gel may cause a fecal impaction.

In bleeding ulcers of the aged, Rafsky and Weingarten[13] showed that the degree of bleeding was not greater in those with hypertension. Furthermore, they noted that the mortality of bleeding was not increased in those having hypertension, but they did find that the greater mortality was due to the occurrence of complications, such as cerebrovascular accidents and coronary thrombosis.

The azotemia which frequently accompanies hemorrhage from ulcer in younger patients is even more marked in the aged. In the younger age group the azotemia is almost always prerenal, since it occurs in the presence of intact kidneys, whereas in the elderly patient who has a bleeding ulcer, there is often an associated renal, as well as prerenal factor. Restoration of normal blood volume and chlorides will result in a prompt lowering of the nonprotein nitrogen to normal levels, provided that prolonged anoxia has not intensified the preexisting renal, or circulatory insufficiency. In administering fluids to the aged, special care must be taken to avoid an increase in the blood volume above normal, since this may easily lead to pulmonary edema.

The Meulengracht regimen is not desir-

able in the treatment of hemorrhage in elderly patients with ulcer, as it seems this method of management results in recurrence of bleeding, pain and perforation. The method of choice is to withhold all oral feedings until the bleeding has stopped. Then small feedings may be started.

For sedation small doses of barbiturates are preferable to opiates during a hemorrhage.

Almost all the deaths from hemorrhage due to peptic ulcer occur in patients over 45 years of age. Immediate surgical intervention is advocated in this group whenever secondary hemorrhage occurs after a period of medical management. In patients over 60 years of age the occurrence of associated diseases adds to the dangers of surgery. Of 28 patients over 60 years of age having hemorrhage from ulcer and who were treated medically by Sandweiss,[14] only three, or 10.7 per cent, died. Kiefer and McKell[5] had 45 patients over the age of 65 years with gross bleeding. All were treated medically, and there were no deaths. The experience of Tanner[15] with surgery for benign nonperforated ulcers in the aged confirms the view that more patients would survive without operation in the absence of hemorrhage.

Pyloric obstruction in elderly patients with peptic ulcer responds to medical measures. Relief of the obstruction indicates that it is inflammatory in origin. Failure to relieve the obstruction indicates that scar tissue is the cause and that operation must be performed.

Surgery for Peptic Ulcer in the Aged

The question of operation for the complications of peptic ulcer is described elsewhere. However, suffice to say that the elderly patient with pyloric obstruction, unrelieved by medical management must be given ample time for preoperative preparation, and gastroenterostomy is preferable to subtotal gastrectomy. Simple suture of the perforation in perforated peptic ulcer is the desirable procedure in the aged.

Case Reports

Case 1. This 82 year old woman had been treated for arteriosclerotic heart disease and myocardial failure for a number of years. There was also a history of anginal pains in the substernal and subxiphoid regions relieved by nitroglycerin. At times she complained of high epigastric, or subxiphoid pain unrelated to exertion and relieved by Amphojel. This had been noted only for several months, and the patient could not determine if the pain was relieved best by nitroglycerin or by the alkali on some occasions. There was no previous history of the use of alkalis or of relief of the pain by foods. Physical examination revealed what appeared to be a smooth movable midepigastric mass about 3 by 4 cm. Upper gastrointestinal series revealed a chronic duodenal ulcer with no evidence of crater formation. The patient was placed on an ulcer regimen to which she responded, and only anginal pain relieved by nitroglycerin occurred for several months. Epigastric pain of the type due to an ulcer was noted again about five months later. A rather strict ulcer regimen was ordered, and the patient responded promptly.

Case 2. This is the case of an 89 year old man who complained of epigastric and left upper quadrant discomfort for the past 14 months. At the onset he had considerable loss of blood via the gastrointestinal tract. The stools were "tarry," and no vomiting of blood occurred. The patient responded to several blood transfusions. The blood pressure varied from 170/80 to 220/80. On one occasion it rose to 260/150. Approximately six months later the patient had another episode of massive gastrointestinal bleeding with "tarry stools," and again blood transfusions were given. During the period between bleeding episodes he continued to complain of dull epigastric pain which responded slightly to antispasmodics and alkalis. However, as he was not completely relieved, complete examination for renal, gastrointestinal and other abdominal disease was requested. Gastrointestinal X-rays were negative on two occasions. Considerable osteoarthritic changes were noted in the thoracic and lumbar spine. The patient continued to complain of the same dull epigastric and left upper quadrant pain for which mild opiates were given at times. At this time, which was twelve months after the onset of symptoms, the patient complained of the same pain associated with abdominal distention and belching. He had an episode of left Bell's palsy at this time. He had another tarry stool, but the red blood count remained around 3,400,000 cells. Gastrointestinal X-rays were negative for ulcer. A barium enema revealed diverticulosis of the sigmoid with probable diverticulitis.

At this point a strict ulcer regimen, consisting of milk with cream every two hours during the day, alkalis, antispasmodics, and a bland diet, was instituted. Smoking and alcoholic beverages were prohibited. Within forty-eight hours the patient became asymptomatic on this regimen, and there has been no further bleeding or evidences of increasing anemia.

In this case a presumptive diagnosis of acute peptic ulcer was made, although the gastrointestinal series did not confirm this impression.

Discussion

There has been an increasing number of patients over 60 years old with peptic ulcer. This increased incidence is not necessarily related to the fact that more of the population is living longer, although this may start in early life, and may continue to cause symptoms and to produce dangerous complications in the aged. On the other hand, this disease frequently has its onset in persons past 60 years of age. In this connection it must be remembered that aged persons may forget some or all of the history of previous gastrointestinal symptoms. However, in spite of this, it is not unusual to find an acute ulcer together with a healed chronic ulcer. The prolonged use of intubation in elderly patients for some other disease may cause the development of some peptic ulcers in the aged.

Since the symptoms of peptic ulcer are usually milder in the elderly patient, the complications of this disease often cause this group to seek medical aid. Characteristic history is uncommon in the aged, and frequently there is no relation to meals. Such symptoms as nausea, vomiting, anorexia are common and suggest malignancy in many of the aged with peptic ulcer. A history of "tarry stools" is frequently given.

Studies show there is a high occurrence of hyperchlorhydria in the aged. In healthy persons over the age of 65, special studies of the gastric secretory response revealed that many of this age group have the ability to secrete large quantities of hydrochloric acid. Thus, the stomach and duodenum are fertile fields for the development of ulcer.

Psychic factors, which are known to be most important in the etiology of this disease in the younger patient, are likewise important in their psychogenic relationship to the etiology of ulcer in the older patient.

Seventy-three per cent of all perforations of peptic ulcer occur between 20 and 50 years of age. Perforations are more likely to occur than hemorrhage in the mature adult, and the mortality rate from hemorrhage increases after the age of 40 years. Hemorrhages occur more often in patients with ulcers after 40 years of age.

The time required for healing of peptic ulcers in the aged is longer than in younger patients. Thus, persistence of an ulcer for several months in this age group does not necessarily signify malignancy. Many recurrences of ulcers have been noted in elderly patients.

The diagnosis of peptic ulcer in the aged depends on the same procedures as that in the young. However, as noted above, the history is often of little importance, and the physical examination may reveal tenderness in the epigastrium or left upper quadrant of the abdomen. Gastroscopic examination may be helpful, although certain definite contraindications may cause this examination to be deferred or eliminated in the aged.

An upper gastrointestinal series may reveal a deformity of the duodenal bulb in many elderly patients with peptic ulcer, but frequently no evidence that the ulcer is active can be found.

The treatment of peptic ulcer in the aged is essentially the same as that in the young, although special consideration and precautions in regard to medications and types of drugs used must be observed, since the aged may not tolerate drugs very well, and the presence of associated gastrointestinal conditions may necessitate some adjustment of the diet.

The complications of peptic ulcer occur more often in the aged, and are much more serious, for in this group the occurrence of other complications, such as coronary thrombosis, cerebral vascular accidents and renal disease, increases the mortality rate.

The treatment of the complications of peptic ulcer in the aged differs from that in the young with this disease. Pyloric obstruction may frequently respond to medical measures. If this does not respond to such treatment, a gastroenterostomy is indicated in preference to subtotal gastrectomy. In perforation, simple suture of the rent is the method of choice. In the absence of hemorrhage, Tanner[15] proved that more patients of the older age groups with ulcer will survive without surgery and, in general, medical management of those with hemorrhage which is not massive or recurrent is preferable.

Summary and Conclusions

The cases in the present report were elderly individuals with short symptoms and

signs of peptic ulcer.

At times, although an x-ray diagnosis may not confirm the diagnosis of peptic ulcer in the aged or in the young, symptoms and signs may be interpreted as sufficient proof for a presumptive diagnosis of this disease, and medical management should be directed accordingly.

I have had one patient who had three episodes of massive gastrointestinal bleeding before an X-ray diagnosis confirmed the presumptive diagnosis of peptic ulcer, and an ulcer niche was finally found. The duodenal bulb had been entirely normal.

There is an increasing incidence of acute peptic ulcer in the aged. A high occurrence of hyperchlorhydria has been found in the aged.

The symptoms of peptic ulcer are usually milder in older patients, and frequently the complications of this disease cause or require the patient to seek medical aid. Hemorrhage and perforation are frequent in the older age group; hemorrhage occurs more often than perforation.

Sufficient time for healing should be allowed in the aged with ulcer before operation is advised, since the healing time in this group is longer. Malignancy may not necessarily be the cause for prolonged healing of a gastric ulcer in the aged.

In diagnosing and managing the elderly patient, due allowance must be made for complications due to the age of the patient. Gastroscopic examination must be done with care and drugs must be used cautiously. The diet should be adequate for the elderly individual, but any associated condition which contraindicates certain foods or milk and cream should be considered.

Operation in the elderly with peptic ulcer should be undertaken only when certain very definite indications exist, but, in general, medical management should be given ample and full opportunity before surgical procedures are advised or carried out, since numerous statistical studies reveal that more elderly individuals survive without surgery.

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This entity remains a troublesome disorder to the patient and physician alike. The author reviews the problem and illustrates the surgical approach to treatment.

CHRONIC PANCREATITIS*

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The importance of pancreatitis lies not in its relative incidence, but in its possible fatal outcome in the acute phase and in the incapacitating nature of the relapsing or chronic phase. The ultimate aim of this paper is to suggest a surgical attack for the late stages of the inflammatory process. To logically arrive at that point we must first briefly review the anatomy, physiology, and inflammatory pathology of the pancreas.

Physiology

The pancreas is a glandular organ of both internal and external secretion. The islets of Langerhans' are ductless and secrete insulin directly into the blood stream. The acinar tissue is stimulated by the vagus nerves to secrete the digestive enzymes, trysinogen for proteins, amylase for carbohydrates, and lipase for fats into the duodenum by way of a ductal system. The main pancreatic duct empties into the ampulla of Vater of the common duct in 75 to 95 per cent of individuals. It is of importance to our subject that trypsinogen, itself inactive, is converted into the powerful proteolytic enzyme, trypsin, within the duodenum by enterokinase and bile salts. Should trypsinogen be activated beyond the confines of the ductal-acinar system or intestinal epithelium, autodigestion of tissue takes place leading to necrosis and hemorrhage.

Pathology

With these facts in mind let us review the inflammatory pathology. The most common form of the disease is acute edematous pancreatitis. The clinical picture is one of severe mid-upper abdominal pain radiating through to the back, nausea and vomiting, and, in severe cases, the profuse sweating and coolness of shock. The essential pathological changes are edema and fat necrosis of the pancreas and adjacent tissue, fluid with a high amylase content in the peritoneal cavity, and an elevated serum amylase. This same picture can be produced experimentally by ligation of the pancreatic duct suggesting that there is simply a backing up and transudation of the enzymes from the ductal-acinar system.[1] Fortunately the majority of patients recover from this stage without progression to hemorrhage and necrosis or recurrence of the acute attack. Therapy includes measures to relieve pain, relax possible spasm of the sphincter of Oddi, and discourage pancreatic secretion. Sedation is best effected with Demerol, as morphine has been shown to cause spasm of the sphincter of Oddi. Atropine and constant gastric suction are used to relax the sphincter spasm and inhibit the secretory activity of the gland. Antibiotics should be given to combat possible infectious agents. Intravenous fluids including salt free serum albumin and whole blood are indicated to counteract the sometimes massive fluid loss by way of edema fluid.

In some cases there is hemorrhage and necrosis producing hemorrhagic pancreatitis. This is usually manifested by profound circulatory collapse and high fever. Pancreatic abscess frequently develops and a fatal outcome is common. Probably the factor responsible for the difference in the edematous and necrotic forms is the conversion of trypsinogen into trypsin within the parenchyma of the gland producing necrosis and hemorrhage.

The group of cases that are of interest to us are those which recover from the acute attack but subsequently have repeated "flare-ups" with ensuing fibrosis, cystic degeneration, localized or diffuse calcification, and atrophy of the glandular elements. The clinical picture becomes one of constant mid-epigastric and back pain, with superimposed acute attacks. This misery leads to narcotic addiction in 50 per cent of cases. Atrophy of both the islets and acini may develop

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producing diabetes mellitus and faulty digestion. Undigested meat fibers and fat may be found in the stool. Weight loss and anemia follow.

Etiology

The variety of therapeutic measures that have been proposed for the chronic phase is evidence in itself that the etiology is still obscure. No one condition can be indicted be it anatomic, chemical, physiologic, or bacteriologic. It is not unlikely that the pathogenesis may vary for the different phases of pancreatitis.

Since gallstones are frequently coexistent and their removal many times apparently prevents recurrence of symptoms, biliary tract disease per se has been suggested as a possible cause. This thesis is particularly applicable to that group of cases with jaundice in which the changes are primarily confined to the head giving intrapancreatic obstruction of the common duct and simulating carcinoma. Response to cholecystectomy and prolonged drainage by a T-tube of the common duct is usually good. However, in the diffuse type at least half the cases have no gallstones. The condition is more common in males, age 25 to 45 years. whereas gallstones are more frequent in females of a slightly older age group. The cases to be presented later were without gallstones.

The exact relationship between alcohol and pancreatitis is not known. Excessive intake of alcohol is frequently associated with acute attacks, and chronic alcoholism was found in 46 per cent of patients with chronic pancreatitis at the Lahey Clinic.[2] Similar figures have been quoted by others. Postmortem examinations of patients dying with chronic alcoholism revealed a 47 per cent incidence of chronic pancreatitis. Many think that the excessive intake of alcohol is the result of the pain while others believe the use of alcohol antedates the disease and precipitates the attacks. Alcohol stimulates the production of hydrochloric acid in the stomach which in turn may cause duodenitis and spasm of the sphincter of Oddi. This condition is of course conducive to a common channel reflux of bile. Whether or not alcohol may act directly on the gland via the blood stream has not been established.

There are various reports in the literature which indicate that the disease may be metabolic or due to an unknown substance released into the blood stream, perhaps trypsin. Acute pancreatitis has been reported following myocardial infarction and after severe trauma to other parts of the body.[1] Longmire[3] reports observing the fibrotic changes of chronic pancreatitis in both the pancreas proper and in a portion of aberrent pancreas in the jejunum, indicating that the local anatomic circumstances may not be an etiologic factor. Acute hemorrhagic pancreatitis can be produced experimentally by ligation of the pancreatic duct and segmental infarction of the spleen whereas either alone will not elicit the change.[1] This suggests that the infarction releases a substance which is capable of activating trypsinogen backed up into the parenchyma of the pancreas.

The common channel theory has been the subject of writing by Doubilet and Mulholland,[6] and Bowers[7, 8] in recent years. Opie,[9] in 1901, first proposed this theory when he found a gallstone impacted in the ampulla of Vater in a patient with a common channel and who died of acute hemorrhagic pancreatitis. It follows that in such an anatomic situation reflux of bile under sufficient pressure to rupture the pancreatic ducts could easily occur with spastic or fibrotic obstruction of the sphincter of Oddi. Some 80 to 90 per cent of patients dying with relapsing pancreatitis have a common channel. Transection of the sphincter allowing bile and pancreatic juice to flow freely into the duodenum, or transplantation of the proximal common duct into a Roux-Y loop of jejunum, thereby completely diverting bile from the pancreatic duct, have both met with some success in the treatment of this condition. However, the lack of universal success, probably due to the absence of a common channel or a diseased sphincter in all cases, leads us to believe that other factors are involved.

Treatment

The therapeutic attacks on the chronic phase have been quite varied. As just mentioned, transduodenal section of the sphincter of Oddi has been recommended by Doubilet and Mulholland. Bowers has pro-

posed transection of the common duct just above the pancreas with a Rous-en-Y choledochojejunostomy reconstruction. Grimson[10] continues to report good results with celiac ganglionectomy. This procedure interrupts both the afferent pain fibers from the pancreas and the efferent secretory fibers. Total pancreatectomy has been carried out with some success but the postoperative diabetes has been a fatal complication in some cases. Vagotomy with either gastroenterostomy or gastric resection has been employed but without impressive results. No procedure has been universally successful.

In our handling of patients with chronic pancreatitis the possible importance of obstruction of the pancreatic duct within the pancreas became apparent. The obstruction may be caused by fibrosis, calcification, or squamous metaplasia of the duct epithelium. Trauma can produce the same clinical and pathologic picture presumably originating from fibrotic obstruction of the duct, since the changes are usually segmental and distal to the area of injury. The frequent cystic changes suggest obstruction of the pancreatic duct as an important factor in the disease. In the patients with relapsing pancreatitis transduodenal section of the sphincter of Oddi became our procedure of choice. It subsequently became evident that after transecting the sphincter the opening of the pancreatic duct could usually be identified in the ampulla of Vater. When this duct could be probed and free flow of pancreatic juice noted the results of sphincterotomy were usually good. When there was evidence of obstruction of the pancreatic duct sphincterotomy was less successful. This led us to assume that the obstruction, be it cause or effect of the disease, must be relieved. This has been carried out by amputation of the tail and part of the body of the gland and anastomosing the pancreatic stump to the jejunum in a Roux-Y fashion. The results of this procedure show much promise.

The following case reports illustrate phases of the disease and the importance of obstruction of the pancreatic duct.

Case 1. A 33 year old white man sustained an abdominal contusion in an automobile accident and was explored with a mistaken diagnosis of retroperitoneal rupture of the duodenum. The tail of the pancreas was ecchymotic and areas of fat necrosis were present. The operative procedure consisted of drainage of the lesser peritoneal sac. The convalescence was stormy and complicated by a pancreatic fistula that ultimatedly closed. Six months later there was disabling indigestion and food intolerance with persistently elevated amylase levels. A second operation identified the tail of the pancreas as firm, grossly inflamed and completely separated from the body of the gland by a fibrous barrier. The detached tail of the pancreas was removed and the patient made a prompt recovery with subsidence of the amylase levels, subsequent weight gain, and return to employment.

Comment. In this patient fracture of the pancreas resulted in detachment of the tail from the body with fibrous occlusion of ductal communications. Under these circumstances of almost impossible biliary reflux, there was persistent pancreatitis relieved by removal of the affected portion of the gland. Microscopically, the gland showed inflammation and dilatation of the smaller ducts (Fig. 1).

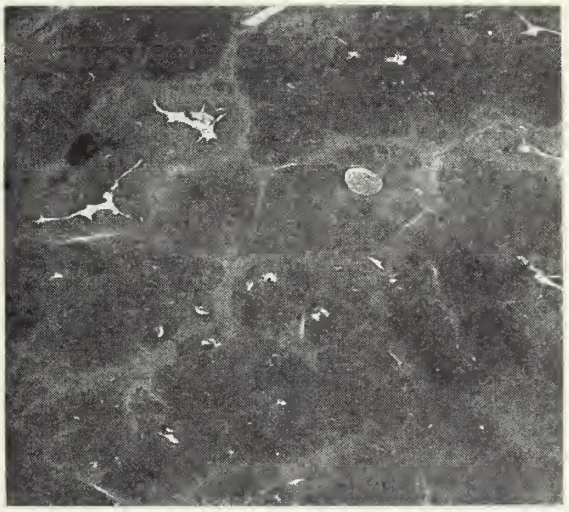


FIG. 1. (Case 1.) Fibrosis of the gland and dilatation of the ducts are seen.

Case 2. A 36 year old white man with a history of excessive alcohol intake, had been incapacitated for 2 months with constant epigastric and back pain. Of several serum amylase determinations, all were elevated except two. An intravenous cholangiogram revealed a calcification in the region of the pancreatic head and constriction of the intrapancreatic portion of the common duct. The remainder of the biliary tree appeared normal. (Fig. 2.) At operation the gallbladder and common duct appeared normal. The pancreas was diffusely fibrotic with a calculus palpable in the posterior portion of the head. Exploration of the common duct revealed constriction of the in-



FIG. 2. (Case 2.) Intravenous cholangiogram outlining the biliary system. Note the calcification in the head of the pancreas adjacent to the common duct.

trapancreatic portion of the common duct but with a normal ampulla and sphincter. Ampullotomy was carried out but the opening of the



FIG. 3. (Case 2.) Operative pancreatogram showing instilled Urokon in distal pancreatic duct with out-flow into duodenum proximally. Scattered dve near syringe tip is spillage in the peritoneal cavity.

pancreatic duct could not be identified. Caudal amputation of the pancreas was done and fluid was noted to escape under pressure from the pancreatic duct. Seventy per cent Urokon was injected into the severed duct and repeated films revealed obstruction in the region of the calculus without flow into the duodenum. (Fig. 3.) A total of 2 inches of pancreas was amputated giving a duct 5 mm. in diameter. A caudal pancreaticojejunostomy (Fig. 4) and T-tube drainage

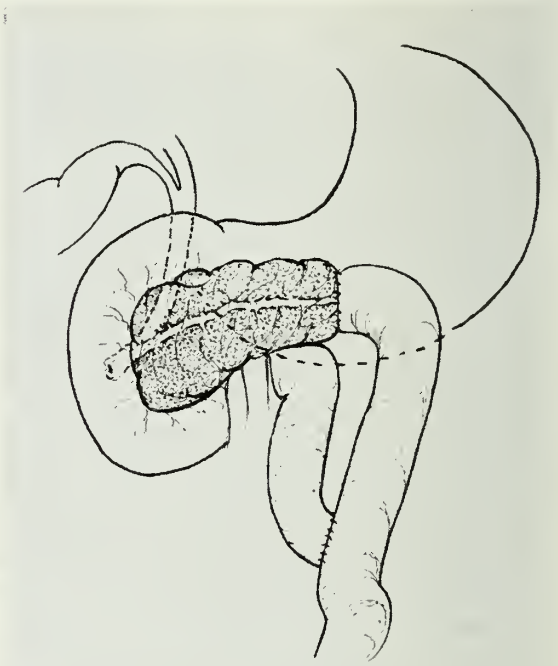


FIG. 4. Diagramatic illustration of the Rous-en-Y pancreaticojejunostomy employed in Cases 2 and 3.

of the common duct was carried out. Except for mild transient jaundice the postoperative course was uneventful. Several blood sugar and amylase determinations were all normal. He was discharged asymptomatic. Four months later there was an episode of upper abdominal pain following an alcoholic bout. The elevated serum amylase returned to normal the day following admission. Now 12 months postoperative he is asymptomatic without further recurrences and has returned to work.

Comment. Ductal obstruction caused by a calculus in the head of the gland produced pancreatitis distal to it, apparently relieved by caudal drainage. Microscopically the gland revealed fibrosis and dilatation of the duct. (Fig. 5.)

Case 3. A 38 year old white man having a 10 year history of epigastric pain and indigestion, had noted constant midback pain for one year. Excessive intake of alcohol was admitted. Preoperative studies revealed a normal gallbladder by

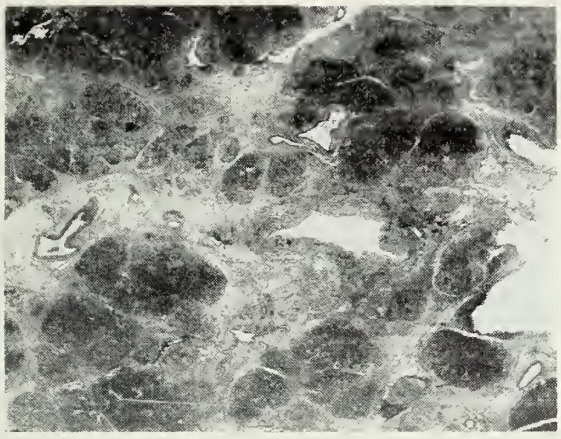


Fig. 5. (Case 2.) Microscopic examination of pancreas revealed fibrosis of the gland and ductal dilatation.

oral cholecystogram and diffuse calcification in the region of the pancreas (Fig. 6). Gastrointestinal X-ray series revealed partial obstruction in the second portion of the duodenum. (Fig. 7.) Six successive serum amylase values were elevated while blood sugar levels were normal.

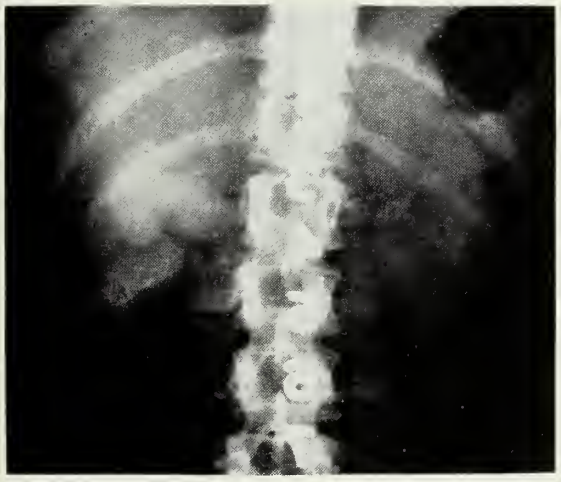


Fig. 6. (Case 3.) Oral cholecystogram showing normal filling of gallbladder and diffuse calcification in the region of the pancreas.

At operation diffuse fibrosis and calcification of the pancreas was noted. There was a fibrous band almost completely encircling the second portion of the duodenum which suggested a form of annular pancreas. The biliary tract was normal except for constriction of the common duct in its intrapancreatic portion. The fibrous band was divided, the normal sphincter and ampulla opened transduodenally and the pancreatic duct identified within a common channel. A probe was introduced with ease only to meet obstruction at 3 cm. from the ductal orifice. The pancreatic tail was progressively amputated for 3 inches before the main duct could be identified. It would then admit a probe only 1 cm. A caudal pancreaticojejunostomy, a Heineke-Mikulicz repair of the duodenal obstruction, and T-tube drainage of the common duct was carried out.

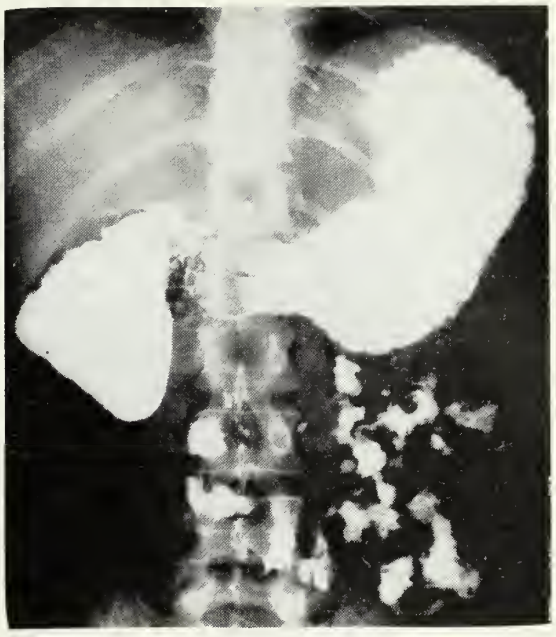


Fig. 7. (Case 3.) Gastrointestinal series revealing partial obstruction of the second portion of the duodenum.

Postoperatively, he developed diabetes which still requires a daily injection of 15 units of NPH insulin one year later. The back pain had disappeared and only mild episodes of indigestion have occurred. He has gained weight and returned to work, and no further hospitalization has been required.

Comment. This patient illustrates marked pancreatic destruction with near obliteration of the ductal system. (Fig. 8.) Is it possible that a congenital abnormality of the pancreatic ducts accompanied the fibrous band contributing to the pancreatitis?



Fig. 8. (Case 3.) Microscopic examination revealing marked fibrosis and atrophy of pancreatic tissue.

Summary

The etiology of pancreatitis has not as yet been defined. It is highly probable that obstruction of the pancreatic ductal outflow contributes to the chronic and relapsing phases of the disease. Three cases have been presented which illustrate intrapancreatic ductal obstruction with a normal ampulla of Vater and sphincter of Oddi. The clinical results with re-establishment of pancreatic drainage are encouraging. It is suggested that future surgical attacks be directed toward this end; first by dividing a fibrotic sphincter of Oddi if such be the case, and probing the pancreatic duct; and second, by caudal pancreaticojejunostomy if pancreatic duct patency cannot be established from the proximal end.

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This form of heart disease, especially as a complicating factor in other types of cardiac disease, may be more frequent than is generally accepted.

BERIBERI HEART DISEASE

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Beriberi heart disease is rare in this country except in alcoholics, and although subclinical cases occur not infrequently due to an inadequate diet, especially of vitamin B_1, this deficiency may easily contribute to the development of congestive heart failure as well as inducing refractory edema. When a patient with long standing congestive failure is seen, the possibility of nutritional deficiency must be entertained.[1]

The following is a case report of a patient with classical beriberi heart disease and his dramatic improvement with parenteral thiamine chloride.

Present Illness. The patient, a 26 year old white man, was admitted to the hospital September 5, 1952, with the chief complaints of painful feet of about 5 months' duration and swelling of the lower extremities of about 2 months' duration.

The patient had worked at various jobs since his discharge from the service in World War II, including sign painting, cab driver and more recently as a bartender. He was apparently well until May, 1952, at which time he noted the insidious onset of numbness of both feet which gradually increased and involved both legs, thighs and abdomen, the latter associated with intermittent cramping abdominal pain. He also noted morning nausea and vomiting of more recent origin and because of this was unable to eat or drink as much as he usually had. He freely admitted drinking heavily for the past few years, as much as a fifth of whiskey daily. His eating habits had also become very irregular; he ate only once a day most of the time. For the past several months he had subsisted on whiskey and Coca-Cola.

Since June, 1952, he had noted numbness and tingling of his hands as well as of his legs. He had pain in both extremities on walking, vaguely localized to the plantar surfaces of the feet and calf muscles; he had difficulty in maintaining his balance while walking. Furthermore he was aware of severe dyspnea when climbing steps, and frequently had rapid heart action. He had one episode of syncope and frequently felt he was going to "black out." Swelling of both lower extremities appeared gradually about two to three months before admission and was present until admission.

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He had been treated by his private physician three to four weeks prior to admission with white heart tablets and injections, and was told he had cirrhosis of the liver.

The remainder of the history revealed the patient had had an episode of jaundice first noted by his mother about 8 to 10 months before admission; at that time his urine was very dark but he noted no change in the color of the stools. The past history was otherwise noncontributory.

Physical Examination. Physical examination on admission revealed a well-developed, well-nourished man who did not appear acutely ill. He seemed amused by the fact that the source of his troubles might have been due to too much drinking.

The blood pressure was 136/80; the pulse was forceful at a rate of 120. Temperature was 98.6°, weight 147 pounds. The tongue was smooth and red with atrophy at the edges. Perleche and fissuring of the corners of the mouth were present.

The lung fields were clear to percussion and auscultation. The PMI was in the 5th left interspace within the midclavicular line. It was forceful and shock-like to palpation; the rhythm was regular. There was a Grade II systolic murmur localized to the pulmonic area; the pulmonic second sound was accentuated and greater than the aortic. Abdominal examination revealed the liver edge palpable two to three fingerbreadths below the right costal margin, smooth and slightly tender.

The lower extremities were markedly swollen, the swelling extending to the midthigh bilaterally. Pitting was possible only over the ankles above which the tissues were not easily pitted. There was marked tenderness of the muscles of both calves. Plantar tenderness was found on percussion. Neurologic examination revealed that the cranial nerves were intact. The motor function was normal, no weakness being present. Sensory examination revealed preservation of pin prick, cotton, and vibratory sense in upper and lower extremities. There was absence of all tendon reflexes in the upper and lower extremities.

Laboratory Data. On admission the WBC was 6,000 with 61% neutrophils, 35 lymphocytes, 1 monocyte and 3 eosinophils. The hemoglobin was 13.5 Gm., hematocrit 45, and the sedimentation rate 30 MM. corrected. The urinalysis was negative. Serologic tests for syphilis were negative. Fasting blood sugar was 91 mg. %; urea nitrogen was 6 mg. %; alkaline phosphatase 3.4 units; serum protein 6.1, with albumin 3.2 and globulin 2.9 per cent. The prothrombin was 14 seconds or

100% of normal. On admission a Bromsulphalein revealed 11% retention at the end of 45 minutes. The serum bilirubin was 0.6, direct 0.2, indirect 0.4. mg.; thymol turbidity was 2.5 and zinc turbidity 9 units. The serum sodium was 144, the serum potassium 4.5, and the chlorides 102 mEq/L. A P.S.P. test revealed that there was 44% excretion at the end of the first hour and 24% at the end of the second hour, total of 68% in two hours. Stool examinations were repeatedly negative for ova, parasites and occult blood. Gastric analysis with histamine revealed a normal response for free hydrochloric acid. A 24 hour urine urobilinogen revealed 7 Ehrlich units on one occasion and 3.3 Ehrlich units on another occasion. The urine concentrated to 1.010 on a 12 hour test. A second Bromsulphalein on Sept. 22 revealed 0.4% retention; again liver function studies revealed a zinc turbidity of 9, thymol turbidity of 5 units, and total protein of 6.5, albumin 4.4, and globulin 2.1%. Venous pressure in the right anticubital vein was 170 mm. of water; Decholin circulation time was 9 sec., ether time 4 sec., with good end points.

X-ray Studies. Examination of the chest revealed the lung fields to be clear. The transcardiac diameter measured 13.8 cm. (maximum limits of normal), there was straightening of the left cardiac border suggestive of mitral valve disease (Fig. 1-A). A second film 11 days later showed the transcardiac diameter to be 12 cm., with less evidence of straightening of the left cardiac border. Upper G.I. series and small bowel studies were within normal limits. There was slight increase in transit time through the small bowel, with barium in the ascending colon at the end of two hours. The pattern of the small bowel was normal.

Hospital Course. The patient remained afebrile during hospitalization. He was placed on a regular diet prior to institution of specific treatment. On the fourth hospital day thiamine chloride 100 mg. I.M. daily was begun and continued for 2 weeks. This led to improvement in the leg pains within 48 hours; leg cramps especially at night continued to disappear after eleventh day of therapy. Weight showed a gradual decline during the first four days of hospitalization while he was on a regular diet; with institution of thiamine therapy the weight loss was doubled during the second and third treatment day and gradually stabilized at 134 lbs., the weight on discharge. The nutritional history obtained from a dietary survey revealed an approximate daily intake providing a total of 250 calories, 10.5 gm. of protein, 220 international units of vitamin A, ascorbic acid 9 mg., thiamine 0.14 mg., riboflavin 0.1 mg. and niacin 2.5 mg. The peripheral edema was almost completely gone by the third and not clinically detectable after the seventh treatment day. The heart rate remained at 86 at rest, the pulmonic systolic murmur was not detectable after the fourth treatment day and the accentuated pulmonic second sound gradually equalled the aortic at about the same time. The venous pressure on discharge was 8 cm. of water, the Decholin time was 14 and the ether time 6 sec. The blood pressure was 126/80 on discharge.

At follow-up examinations on January 5 (see Fig. 1-B), and on March 16, 1953, the patient had no complaints. He had gained considerable weight, was not due to edema and, although he had returned to working at a tavern, he denied drinking more than one or two beers daily. Physical examination on these dates was normal. The electrocardiogram showed residual right bundle branch block. (See Fig. 2, 3, 4.)

Discussion

In considering the type of heart disease in this patient, one must make the differentiation at a clinical level. The features here involve a discussion of a failing heart associated with an exceedingly rapid circulation. There are not many known etiologic

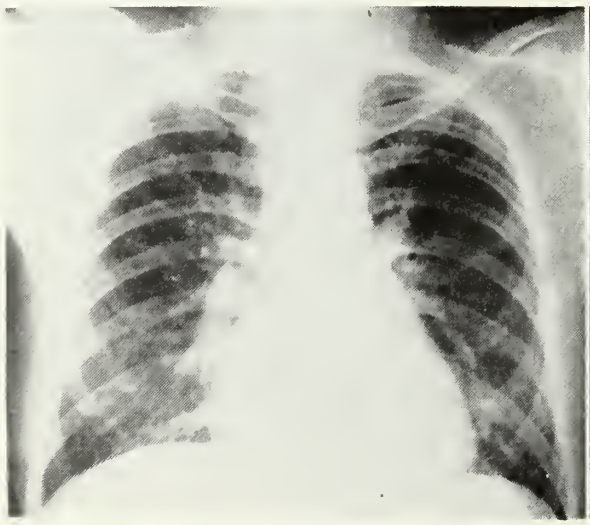


Fig. 1-A. There is prominence in the area of pulmonary conus and a globular configuration.

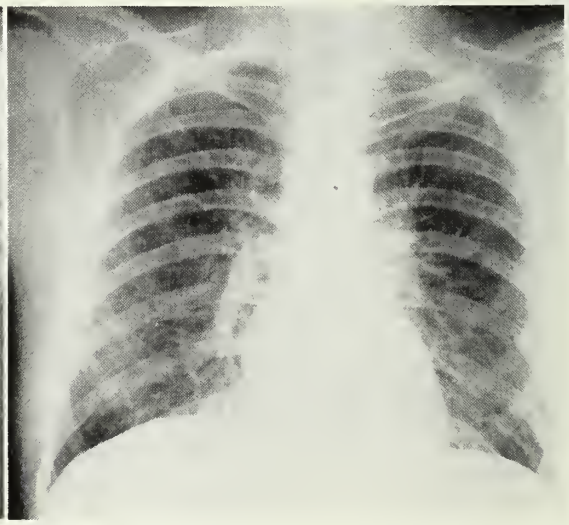


Fig. 1-B. Normal cardiac silhouette 6 months after treatment.

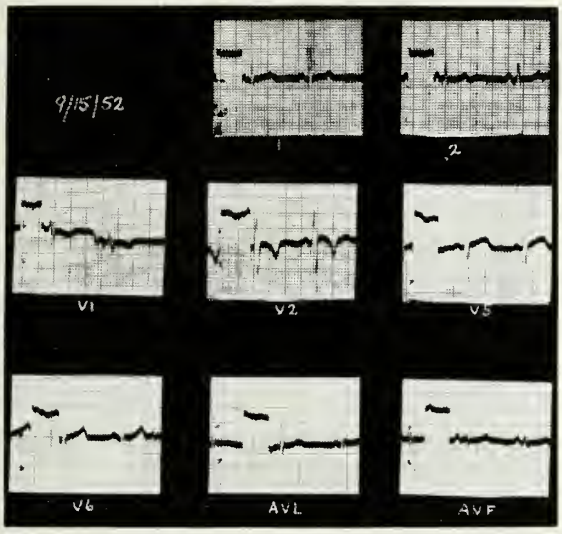


FIG. 2. EKG on admission. Note low voltage QRS and T wave changes.

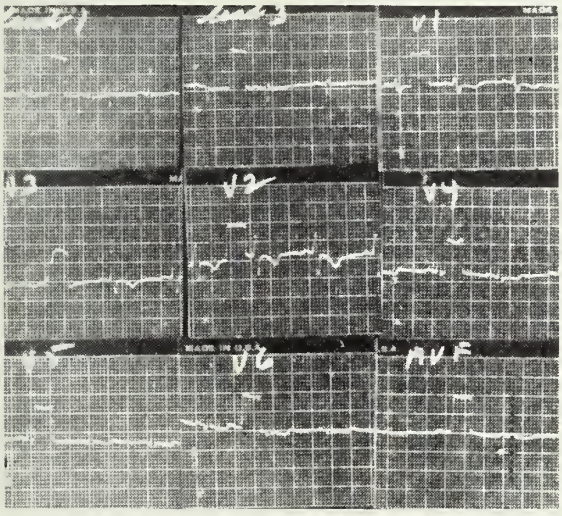


FIG. 3. EKG 12 days after starting treatment with parenteral thiamine, showing further T wave changes in V_1 thru V_6.

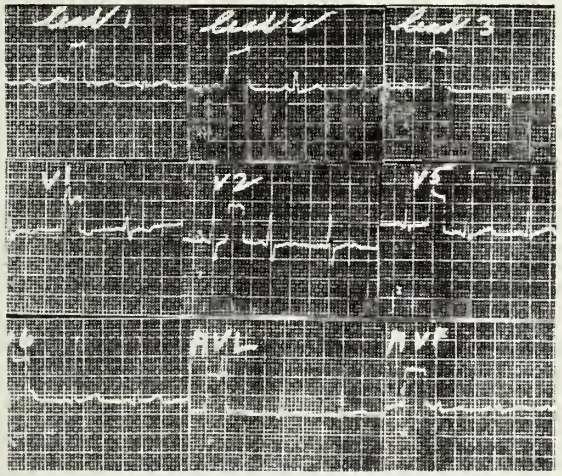


FIG. 4. EKG 10 months after discharge. There is improvement in QRS and T wave voltage.

factors which require differentiation, though some of these will be presented for consideration.

Initial and final elimination of coronary arteriosclerosis as a cause has in other similar instances been sometimes difficult, and one must bear in mind that patients with chronic organic heart disease may have, in addition, cardiovascular disturbances related to avitaminosis. However, in this case little consideration should be given to this type of heart disease in the absence of angina pectoris or precordial oppression, and the subsequent course of this patient. In instances where such differentiation may be required, the combination of hypertension, symptoms and signs of severe right sided failure, refractoriness to digitalis but adequate response to diuretics, may be helpful in arriving at a decision.

Cardiac disease associated with hyperthyroidism involves the recognition of both the hyperthyroidism and the cardiac complications. We all recognize the familiar clinical picture of hyperthyroidism, and in such cases of obvious Graves' disease, one may consider thyroid heart disease when, in addition, there is frequent paroxysmal or persistent auricular fibrillation, unquestionable roentgenologic evidence of cardiomegaly, or obvious clinical findings of congestive heart failure. The more occult problem presents itself when the primary manifestations are cardiac and hyperthyroidism is uncovered secondarily. There is little doubt that our patient does not conform to the clinical picture of what one might call thyroid heart disease. Anemia and fever as a cause of cardiac failure need little more than mention since our patient had neither.

Cor pulmonale is also associated with rapid circulation and cardiac insufficiency. In the absence of the characteristic clinical and roentgenologic features of chronic pulmonary disease, there is little clinical ground for considering this etiologic type of heart disease in our patient.

For the sake of completeness, the group of myocarditites which Candel and Wheelock[2] choose to group under three subdivisions is listed: (1) specific myocarditis, such as that due to rheumatic fever, tuberculosis and syphilis; (2) nonspecific myocarditis of known etiology, such as

diphtheritic, that following tonsillitis and typhus fever, and that of unknown etiology commonly known as Fiedler's; and (3) septic myocarditis as seen in association with septicemia and subacute bacterial endocarditis. These possibilities can be ignored since our patient showed none of the associated phenomena of leukocytosis or fever, or previous acute or chronic infectious disease.

Other possibilities in the differential diagnosis to be considered are arteriovenous aneurysm, amyloidosis, glycogen storage disease (Von Gierke), glomerulonephritis, lupus erythematosis, scleroderma, polyarteritis nodosa and Boeck's sarcoid. None of these entities deserve further consideration in our patient.

Beriberi heart disease has been known and well described in the Orient and given consideration in this country by the late Soma Weiss[3] and more recently has been emphasized by Blankenhorn[4, 5] and others.[6] Blankenhorn has shown that the oriental concept, originally developed by Wenckebach, of rapid circulation in the face of heart failure differs considerably from that seen in the Occident. He also has reorganized the requirements for the diagnosis with less rigid criteria based on the combination of nutritional, cardiologic and neurologic concepts of the disease. Both Weiss and Blankenhorn believe that the disease is not rare in general hospitals where other deficiency diseases occur and that beriberi may complicate chronic heart disease of other causes.

Wohl and associates[7] studied the incidence of subclinical thiamine deficiency in 35 patients with cardiac failure by means of 24 hour urine determinations before, during and after the injection of mercurials. The mean thiamine excretion in the group with congestive heart failure was about 3.5 times greater than the control group of noncardiac patients. In the group of patients who received mercurial diuretics the 24 hour urinary thiamine content showed a significant increase in thiamine excretion.

Pathologically, one notes lesions in both the myocardium and the nervous system. Alterations of the normal architecture of the myocardium has been described for many decades without revealing a pathognomonic picture or a clue as to the pathogenesis. Earlier studies emphasize the large dilated right heart but more recently over all hypertrophy and/or dilation have been the usual findings in this country. Microscopically, hydropic degeneration of the myocardial fibers and conduction bundle and an increase in collagen are the observations which are consistent with but not diagnostic of beriberi heart disease.

The lesions of the nerve are essentially degenerative and involve the central, peripheral and autonomic nervous system. In the series of cases reported by Blankenhorn a triad of lesions were noted, namely, (1) degenerative alterations of the cells of the nucleus sympathicus and of the tracts of the lateral horn in the upper cervical segment of the spinal cord; (2) damage of the spinal cord roots and far advanced degeneration of the vagus nerves and some of the peripheral nerve trunks; and (3) mild cellular changes within the sympathetic chain. These changes, however, are not pathognomonic for the morbid process.

King and Sebrell[8] reporting on experimental thiamine deficiency in rats were unable to demonstrate a direct correlation between the occurrence of auricular fibrillation and nodal rhythm and the degree of demonstrable pathology. These authors feel that the physiologic and pathologic changes appear to be the result of abnormal tissue metabolism.

Olson and Schwartz[9] in a study of myocardial metabolism in congestive heart failure point out that metabolic reactions in heart muscle are similar to those in other tissues and are dependent on a system of coenzymes in part derived from the vitamins of the B complex. Hormones also appear to exert some effect by modifying enzymatic activity. The most striking example of myocardial failure associated with coenzyme depletion is seen in beriberi. As a result of inadequate intake of thiamine "All tissues undergo depletion of cocarboxylase, the enzyme concerned in the oxidation of pyruvate to active acetate." As a result completion of the intermediate reactions in carbohydrate metabolism are interrupted; consequently, the blood pyurvate and lactate rise, producing vasodilatation and increased cardiac output. The vicious cycle which

then ensues is due to failure of the myocardium to meet the increased work load and congestive failure results.

In a series of 47 patients, reported by Oppenheim,[10] who died with Laennec's cirrhosis and signs of myocardial involvement, a definite casual interrelationship was thought to exist between the degree of anatomic changes in the liver and the alterations of the electrocardiogram. All cases dying before the age of 50 had hypoproteinemia and abnormal EKG's, whereas those with abnormal EKG's but with normal blood proteins or vice versa lived longer than 50 years. None of the patients with normal EKG's and blood proteins died. This author considered these observations additional evidence to support the development of degenerative myocardial changes (myocardosis of Wuhrman) in the presence of the dysproteinemia found frequently in association with Laennec's cirrhosis.

Burwell and Dexter[11] were the first to confirm, by means of cardiac catheterization, the observation that cardiac failure in patients with beriberi is associated with an increased cardiac output. From their measurements of the pressures in the pulmonary artery and right ventricle in a patient with beriberi heart disease, they concluded that in heart failure due to this disease, the cardiac output may be elevated both absolutely and in relation to oxygen consumption. Blankenhorn believes that in addition to the metabolic factors the moderation of the pulse may be mediated through the vasomotor nerves, and this may be a significant factor in the symptoms and perhaps an important factor in decompensation. When patients with beriberi heart disease are given vitamin B_1, the circulation appears to improve but the cyanosis and edema may get worse. The possibility has been suggested that blood which had previously been going to the less useful areas (skin) now might be deviated to more vital areas such as the kidneys and liver. Until we know what proportion of cardiac output is allotted to these various areas in different types of congestive failure, we cannot answer questions as to whether the pathologic physiology is due to generalized venous congestion or to inadequate blood flow to certain organs.

Lahey and associates[12] discussed the hemodynamics of beriberi in a case with massive edema and venous hypertension, and concluded that the cardiac dynamics were compatible with an increased rate of blood flow but were not indicative of myocardial failure. The auricular peripheral venous pressure relationship was the reverse of that seen in right heart failure, which suggested the existence of an arteriovenous shunt with transmission of the arterial pressure through a dilated arteriolocapillary network. The shunt was compared with that of an A-V fistula but the fundamental difference was in the nature of the shunt. Thus, in A-V fistula the shunt is from artery to vein whereas in beriberi it is through the dilated capillaries. Furthermore, in beriberi the defect is generalized, at least in the extremities. The evidence that altered capillary permeability plays a role in this mechanism is inconclusive. Development of edema at the outset is characteristic of beriberi whereas in A-V fistula edema did not develop until the right heart fails. The symptoms often associated with beriberi heart disease include palpitation, fatigue and tachycardia. Dyspnea and peripheral edema may develop early. Other symptoms which we identify as evidence of left ventricular failure and then right ventricular failure may follow. Shock may result from acute cardiac failure or acute peripheral vasodilatation. Late manifestations, such as syncope with hypotension, with other evidences of shock may dominate the clinical picture.

Galfond and Bellet[13] reported on cardiovascular manifestations of beriberi based on a study of 10 patients who conformed to the criteria of Blankenhorn. These authors believed that the time required to produce beriberi heart disease varies with the degree of hypovitaminosis, amount of physical activity and the presence of complicating disease. Severe congestive failure is apt to develop relatively quickly in patients with mild manifestations of polyneuritis who continue muscular work. The criteria proposed by Blankenhorn are as follows:

(1) Insufficient evidence for other causes which involve the elimination of such etiologic factors as have been mentioned in the preceding discussion (coronary artery dis-

ease. Fiedler's myocarditis, postpartum myocardosis). Separation of beriberi from idiopathic hypertrophy appears to be impossible with the present criteria, in view of the recent studies by Dock, Kugel and Stoloff, since implication of nutritional factors appears to be strongly substantiated.

(2) Three or more months on a thiamine deficient diet. Actually, this time interval is arbitrary and subject to considerable variation, but was established to aid in the evaluation of the problem. Alcoholism accounted for most of the poor dietary intakes; drug addiction, food fads, and severe gastrointestinal disease were other contributing factors.

(3) Signs of neuritis or pellagra. Neuritis may be determined by such findings as tender calf muscles, absent ankle jerks, alteration of other reflexes with changes in sensory modalities, the latter in a stocking distribution. Other evidence of nutritive failure, such as anemia, hypoproteinemia, skin lesions of pellagra and painful glossitis may be present.

(4) Enlarged heart demonstrable radiologically and with sinus rhythm.

(5 & 6) Dependent edema often disappearing after bed rest and elevated venous pressures.

(7) Electrocardiographic changes universally present but usually minimal and nonspecific. These changes have been demonstrated experimentally in subjects on thiamine deficient diets and abolished by the administration of thiamine. The most common EKG changes were low voltage and minor T-wave alterations. Heart block and bundle branch block were also noted.

(8) Recovery with decrease in the heart size or autopsy evidence consistent with beriberi heart disease "including nutritional type cirrhosis of the liver."[14] With compensation the failing heart will decrease in size and this applies particularly to the heart in beriberi, especially with rest and the administration of thiamine.

It would seem likely that the treatment with thiamine in beriberi heart disease might be considered specific. Some of the patients treated with rest and unrestricted diet alone improved. However, because of inadequate control periods, especially in the oriental literature, this factor cannot be truthfully evaluated. One obvious reason is that these patients are frequently too ill to permit prolonged or adequate control periods, and the inherent danger of shock with death is more real than apparent. Nevertheless, it would appear that some correlation exists between a short duration of symptoms and a short recovery period following treatment. Frequently, due to the unreliable history of these patients, most of whom are alcoholics or addicts, this correlation is uncertain. When recovery occurs, it may be associated with rapid diuresis and cardiac compensation within 24 hours on doses of 50 to 100 mg. of thiamine given parenterally. How frequent this response is cannot be ascertained with accuracy. The dictum that beriberi heart disease fails to respond to digitalis and diuretics has been challenged since one would expect improvement if the views of Wenckebach are accepted, namely, that failure occurs because of loss of "tone" and "contractility." Certainly, the presence of organic heart disease complicated by beriberi exists, but our present methods of diagnosis are inadequate to distinctly separate such features. Usually, however, beriberi heart disease is not improved by digitalis or diuretics. Failure to respond to treatment with thiamine is not regarded as sufficient proof to exclude beriberi heart disease. Furthermore, according to Allerman and Stollerman,[15] oral therapy is ineffective and when parenteral therapy is discontinued for the oral route, recurrence of symptoms and signs may become manifest.

Griffith[16] reported a study of the cardiac status of 109 men who survived the acute effects of beriberi and severe malnutrition in Japanese prison camps during World War II. This author concluded that none of this group had residual heart disease directly attributable to beriberi approximately seven years after release from imprisonment.

Conclusions

In conclusion, a 26 year old white man with a history of chronic alcoholism and an associated markedly deficient diet developed signs of cardiac failure and polyneuritis. The dramatic response of both cardiac and

neuritic symptoms to 100 mg. of thiamine chloride daily appear to justify the diagnosis of beriberi heart disease.

The criteria established by Blankenhorn have been discussed and should suggest this etiology when considered together. The triad of nutritional deficiency, cardiac symptoms and evidence of peripheral neuritis should lead to the suspicion of beriberi heart disease.

That beriberi heart disease may be associated with other organic types is undoubtedly a reality but may be difficult to demonstrate by available methods of investigation. Caution should be exercised in subjecting patients in late cases to strict therapeutic control, especially when showing low blood pressure and syncope.

The author wishes to acknowledge the helpful criticism and suggestions of Dr. Richard France, Chief, Medical Service, Veterans Administration Hospital, Nashville, Tenn., and Dr. P. D. Genovese, Veterans Administration Hospital, Indianapolis, Ind., in the preparation of this paper.

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STAFF CONFERENCE

University of Tennessee and John Gaston Hospital*

DR. DAN COPELAND: This 28 year old colored female was admitted on May 15, 1956, with the chief complaint of dyspnea for 10 days.

Present Illness: The patient was well until three weeks prior to admission, when she had the onset of a cough productive of dark brown sputum. Paroxysms of coughing had tended to initiate vomiting. Ten days prior to admission, the patient, while playing with children, had the sudden onset of sharp left precordial pain. The patient stopped her exertion and sat down, but the pain persisted for four or five hours, and finally ceased spontaneously. The same evening the patient had the onset of dyspnea and orthopnea so severe that she had to sit up all night. She vomited several times that night and on one occasion vomited up material streaked dark red.

Nine days prior to admission the patient's stomach became sore. Also for nine days she had had intermittent sharp abdominal pain starting in the mid-line at the level of the umbilicus and radiating towards the right flank. This pain was related to neither meals nor bowel movements.

The patient was sent to the general practice clinic by her family doctor and was treated there for eight days with sublingual tablets for her chest pain. The patient states that these pills relieved both the chest and the abdominal pains. The dyspnea and the orthopnea increased and pedal edema was noted on the day of admission.

Past History: The past history and review of systems reveal no stigmata of rheumatic disease. When twelve years old a diagnosis of estivo-autumnal malaria was made at the hospital; she was discharged as cured after atabrine therapy. A friend whom she had visited frequently has TB which was diagnosed last year. Her last delivery was ten months before admission. History was otherwise negative.

Physical Examination: Physical examination on admission revealed BP 94/80, P 130, R 30, T 98.4, wt. 104 lbs., ht. 72 in., and arm span 72 in. The patient was a tall, thin colored female, who was in moderate respiratory distress. Examination of her eyes revealed no subluxation of the lenses. There was no inflammation of the pharynx. The neck revealed distended neck veins in the sitting position. The lungs were clear to percussion and auscultation. Examination of the heart revealed the PMI to be diffuse in the 6th ICS at the MAL. All sounds were thought muffled. A gallop rhythm was noted. No definite murmur was heard at that time. Examination of the abdomen revealed the liver edge to be tender and palpable at the level of the umbilicus on the right and 3 cm. below the costal margin on the left. There was 2+ pitting pre-tibial edema. No subcutaneous nodules were found on her extremities, and there was no clubbing, no cyanosis, and no skin rash. Pelvic examination revealed a second degree retroflexion of the uterus with a moderate leukorrhea.

Laboratory Studies: Laboratory examination revealed a hematocrit of 42% on admission and WBC 12,850 with 68% Polys, 32% Lymphs. Sedimentation rate was 2 mm./hour; this was repeated three times. The urine showed 5-10 WBC/HPF, rare RBC/HPF, and an occasional WBC cast. Urine culture was negative. The venous pressure on admission was 310 mm. saline. Circulation time, arm to tongue, was 45 seconds; arm to lung was 20 seconds. Following digitalization, these values were normal. Sickle cell preparations were negative. Gram stain on sputum revealed gram positive cocci. Acid fast stain was negative. NPN was 41 mg. % on admission and 36 mg. % later. Total proteins were 5.1 Gm. %, albumin 3.2 Gm. %, globulin 1.9 Gm. per cent. This was repeated without change. VDRL was nonreactive. Throat culture grew out pneumococci. The ASO titer came back 50 Todd Units; all subsequent titers have been lower. C-reactive protein was 2+ on admission but has been negative since that time. Congo Red test revealed 68% retention. PPD #2 was 1+ in 48 hours. The LE prep was negative at first, but on one occasion two LE-like cells were reported. The I131 uptake was normal. Lumbar puncture done on the 23rd of July revealed no abnormalities. Six blood cultures have been reported negative.

Hospital Course: The patient was digitalized, given oxygen and diuretics. On auscultation for the following two or three days, no murmurs were noted. Later on a transient diastolic murmur was heard at the apex. On May 26 she was given thiamine hydrochloride, 100 mg. t.i.d. because her failure was not well controlled by digitoxin 0.2 mg. daily. On May 30 she was started on Prednisilone, 20 mg. b.i.d. This dose was gradually reduced, and on June 11 this was changed to hydrocortisone, 20 mg. b.i.d. On June 16 steroids were discontinued. One week later the patient was dyspneic and orthopneic; her liver was palpable two fingers below the right costal margin, though she had been under maintenance digitalis the entire time. A pronounced systolic thrill was heard; this was associated with a split second sound. There was no definite murmur. She was given sodium salicylate grains 10 every 4 hours, also. Because we couldn't control this failure by the usual methods alone, she was again started on Prednisilone, 25 mg. b.i.d., and responded very well. The dosage of Prednisilone was again gradually reduced, and on August 2 it was discontinued. At no time had she been febrile.

*From the Division of Medicine, University of Tennessee College of Medicine, Memphis, Tenn.

The EKG on admission showed a sinus tachycardia with notching of P-waves and a rather marked left ventricular strain pattern; following digitalization the only abnormality has been low T-waves.

She was discharged on August 3, and through an administrative error, did not receive her digitalis. When seen in the OPD 10 days later, she had a pulmonic systolic murmur. She also had a well-defined mid-diastolic and presystolic rumble at the apex. Her liver was down 4 cm. at that time and she had gained about 5 lbs. She was readmitted to the hospital and was redigitalized. By the morning after her admission, the murmurs were replaced by a split P_2. She was given a very short course of Prednisilone and then discharged again to the OPD on digitalis leaf, 1.28 grains daily.

DR. DAVID CARROLL: The first X-ray examination of the chest on this patient was dated May 15, 1956, and shows a very marked enlargement of the heart (see Fig. 1). The cardiac contour was quite globular

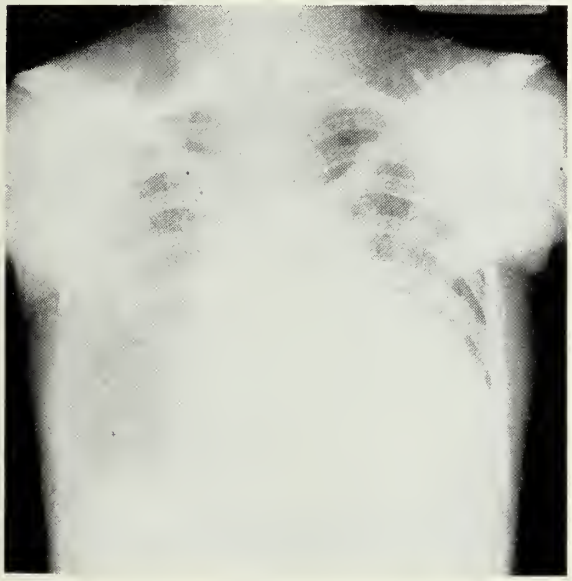


FIG. 1.

in type and suggestive of either generalized heart enlargement or even pericardial effusion. Rather marked congestive changes were noted in the lungs. Because of the non-specific character of the cardiac contour and because of the possibility of pericardial effusion, fluoroscopy was advised. The following day, May 16, the chest was fluoroscoped, and a repeat X-ray film of the chest was made. Pulmonary congestion had cleared up considerably and it was quite definite from the contour of the heart that the chamber of principal enlargement was the left ventricle. Two findings at fluoroscopy were quite important. Firstly, the heart changed shape with position, the base becoming considerably wider in the supine position. Secondly, there was a marked decrease in cardiac excursion, a finding which was confirmed by roentgen kymogram. Although these two fluoroscopic observations are usually indicative of pericardial effusion, they can also be seen with a very weak, flabby myocardium. Since the cardiac contour is not that of effusion, but that of left ventricular enlargement, the roentgen impression would be as follows: (1) Marked cardiac enlargement, left ventricular type; (2) Marked loss of myocardial tone; (3) Pulmonary congestion.

DR. TOM STERN: At right heart catheterization we found that this patient had an enormously dilated right ventricle, one so large that our catheter did not reach the pulmonic valve area. There was no evidence of shunt within the heart or the vena cava. She did have an elevated end-diastolic pressure and a slightly elevated systolic pressure in the right ventricle. This is non-specific and is fairly characteristic of failure, which we already knew she had.

On admission, this patient was an acute problem in diagnosis and therapy. She was tachypneic, breathing 40 or 50 times a minute; her heart rate was 150, and she was extremely uncomfortable and looked as if she might die at any time. We were presented with a girl without any obvious cause for heart disease and wanted to establish a diagnosis. However, we didn't feel that we had much time to decide just what the trouble was. The history, as far as we were concerned, was absolutely non-revealing. The cough that she had had a few days before admission we felt was most likely the first manifestation of her failure, rather than being an infectious episode. There were no other signs or symptoms of infection at that time. We can't say for sure that she did not have a virus upper respiratory infection a few days before admission, but it sounded like a cough of cardiac failure and I am going to continue to consider it as such.

Her body habitus interested us considerably. You all saw how long and thin she is. There was no evidence of subluxation of the lens, however, nor any definite sugges-

tion of aortic disease. There was no history of rheumatic disease and we could hear no murmurs. This didn't disturb us so much at the time of admission, because at the rate of 150, we felt they could very easily be missed. We were a little bit more bothered by the sedimentation rate of 2 mm. It is possible to have rheumatic carditis with a normal ESR but it is unusual. The C-reactive protein was positive on one occasion but this of course is no more specific than the ESR, and the ASO titre was not elevated.

There was no evidence for thyrotoxicosis, other than the tachycardia and heart failure. My personal feeling about thyrotoxicosis is that it does not usually cause cardiac failure in the absence of an already diseased heart. Young people just do not get thyrotoxic heart failure commonly. It occurs in people who have previously diseased hearts, perhaps not clinically so, but demonstrated by the pathologist. At any rate, she had no other signs of thyrotoxicosis. We briefly considered beriberi, but she has an adequate nutritional history. This does not rule out vitamin deficiency, of course, but it makes it unlikely. The prolonged circulation time was against high output failure.

At this point we gave her digitalis. She responded well and yet not so well; she came out of her critical phase, but did not come out of her failure. Nor did the failure disappear when we continued with mercurial diuretics. Our best diagnostic term at this time was "myocarditis"—type unspecified. She had EKG changes that were compatible with myocarditis. She had a great big heart; and it's fairly characteristic in myocarditis that you get a tired muscle that flops and sags, much as Dr. Carroll described this one doing. In other words, if the muscle is weak enough and has poor enough tone, it will not hold its shape. You get the same effect from a weak myocardium that you get from a pericardial effusion held in only by the thin pericardial membrane. The problem, then, became one of trying to decide what the myocarditis was due to, and that's the problem that we are still working on at this time.

Now, myocarditis is a common disease. It's been found by Gore and Saphir[1] in between 1.5 to 2 per cent of all autopsies, not just autopsies with known heart disease. However, in most cases some reason for the myocarditis can be found. Rheumatic fever is undoubtedly most common. Saphir has run several large series on myocarditis and has demonstrated this pathologic finding following almost every type of infection, diptheria, tuberculosis, viral and rickettsial diseases being the most frequent offenders from a percentage standpoint. It's very difficult to say whether or not there is a virus etiology here. It is possible that she did have a mild viral disease, and myocarditis doesn't have to follow a severe viral disease; it can follow a mild one. She may have had subclinical infection. However, in our present state of knowledge, I think that diagnosis depends completely on showing that there was a viral disease present either shortly before or coexistent with myocarditis; in its absence, we are quite severely limited. Interestingly, Dr. Saphir found myocarditis in 5 out of 135 deaths from malaria. Malaria is the only disease that we find in this patient's past history, but she had it when she was twelve years old. She certainly hasn't had anything at all suggestive of malaria in the recent past or even moderately distant past, so I think it can be safely disregarded.

The second category of myocarditis, according to Saphir, is the specific type. This is characterized by either definite anatomical changes in the heart that we recognize and can record, such diseases as rheumatic fever or sarcoid or an identifiable pathogenic organism. Let me say a word or two about a form of specific myocarditis other than rheumatic fever that might be considered, and that is lupus. There is really very little in the clinical picture to point to lupus except that she does have myocarditis that we can't account for. Dr. Diggs tells us that we don't have to pay too much attention to two LE cells, not very definite LE cells, at that. The albumin, globulin amounts and ratio were normal and there hasn't been any fever. Again, the sedimentation rate hasn't been elevated. However, it's interesting that the point Dr. Kampmeier stressed when he was down here last spring, pyuria without any bacteria in the urine, was present on admission. I don't put much confidence in that finding; it's



it's a BITTER PILL *to swallow . . .*

Only 36, or 1%, of Tennessee's 3,535 physicians contributed last year to the American Medical Education Foundation - organized by the American Medical Association to seek financial aid for our nation's medical schools. And, only 13.7% aided medical education and research through gifts to alumni programs in their own schools.....Why should Tennessee doctors give? Simply because tuitions plus endowments are not sufficient to meet operating expenses in our medical schools today... and, unless these operational deficits are met, the practice of medicine, as we know it, will no longer exist, tomorrow! That is, unless Federal subsidies and subsequent controls confuse the picture - perhaps another bitter pill.....There is a place, and this is the time for a bitter tonic! We can now lift Tennessee from the bottom in the number of physicians expressing faith in the character of our medical schools by earmarking a contribution to the medical school of our choice...or better still - by sending a check to the Foundation TODAY in care of any of the following Tennessee physicians:

1st District - Dr. Bob Bowman, Johnson City
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5th District - Dr. J. B. Black, Smyrna
6th District - Dr. Louis Rosenfeld, Nashville
7th District - Dr. Will Fuqua, Columbia
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9th District - Dr. W. E. Anderson, Dyersburg
10th District - Dr. Jean Hawkes, Memphia

REMEMBER, too, contributions to medical education can save us money on income taxes!!!

American Medical Education Foundat

From the Executive Secretary

ORGANIZATIONAL NEWS

Dependents Medical Care Contract Negotiated on Nov. 5

● The Department of Defense notified the Tennessee State Medical Association's negotiating committee to meet in Washington with the Department of the Army on November 5, 1956 for the purpose of negotiating the contract for implementation of Public Law 569, the Dependents Medical Care Act. As authorized by the House of Delegates, the President of TSMA has appointed Dr. Jas. C. Gardner, Chairman of the Board of Trustees and Treasurer; Mr. Charles L. Cornelius, Sr., Attorney for the Association, and the Executive Secretary to act as the negotiators for the contract. A form contract has been received for prior study and many of the problems and misunderstandings will be ironed out during the negotiations in Washington on November 5.

Meeting of Board of Trustees, Nashville October 21

● The Board of Trustees of TSMA met in Nashville on October 21 for the purpose of conducting its business in the semi-annual meeting. Among many important items of business transacted by the Board were the following:

1. Adopting the Declaration of Trust setting up the manner in which the Memorial Trust Fund will be administered. The Memorial Trust Fund was established through Resolution #7 in the April meeting of the House of Delegates. The Memorial Trust Fund sets up an organization to receive money, the income from which is to go to medical charities within the State of Tennessee. Trustees named by the Board to administer the Memorial Trust Fund were Dr. Henry Douglass, Nashville, Dr. Ernest G. Kelly, Memphis, Dr. Joseph Platt, Knoxville.
2. Broadened the Study Committee on the Legal Definition of the Practice of Medicine. Also named Dr. Frank Luton of Nashville to Chairman this Committee instead of Dr. Carrol Turner of Memphis, who resigned.
3. Reviewed in considerable detail the form contract submitted by the Department of Defense, covering the Dependents Medical Care Act. Details of the contract and requirements were explained by Mr. Chas. Cornelius, attorney for the Association.
4. The Board reviewed and accepted the nine months financial statement of operations.
5. Approved a budget for 1957.
6. Considered a lengthy report presented by Dr. John Hughes and Dr. W. C. Chaney of Memphis. The report dealt with the University of Tennessee School of Medicine's program of assistance for thirty hospitals in West Tennessee.
7. Discussed plans for the 1957 annual meeting.

Committee Activities

● Two important committees of TSMA held meetings in Nashville on October 26. The Grievance Committee conducted an important hearing on a complaint submitted to it for study. Members of the Committee from throughout the state as well as witnesses appeared before the Committee.

Symposium Postgraduate Education Committee

● Members of the Symposium Postgraduate Education Committee also met on October 26th for the purpose of reviewing the program for the past twelve months and selecting subjects, speakers and locations where the symposiums will be conducted in 1957. Attendance at the symposium programs has exceeded expectations and reports brought before the com-

mittee were highly complimentary of the type program now being conducted.

Seventh Annual County Medical Society Civil Defense Conference November 10-11

● The Council on National Defense of the American Medical Association sponsored the Seventh Annual County Medical Societies Civil Defense Conference in Chicago on November 10-11, 1956. Such conferences are designed to assist local groups with health and medical planning in civil defense. Individuals of local health and medical organizations were provided the opportunity at these conferences to discuss and exchange information of mutual interest and concern.

Doctors Fees Still Behind Overall Cost Of Living

● The Wall Street Journal reported recently that in spite of increased income, doctors fees are still behind the overall cost of living. In 1956, the cost of all types of medical care is expected to reach $11.8 billion, of which $3 billion will go to physicians. Auto mechanics and repairmen will receive $1 billion more than doctors. U. S. Bureau of Labor Statistics indicate general practitioners' fees have increased by 67% since 1939 while surgeons' fees increased only 56.5%. In the same period, the overall cost of living has increased 92.8%.

Things to Come

● The Federal Government is building up a new public Medical Care Program that will closely match in scope and size the Veterans Administration. The Public Assistance Medical Care program as it is called, will be conducted under Social Security Laws encompassing some 5 million Americans, about 3% of the total population. It is estimated the program will cost $200 million annually for medical hospital, dental and ancillary services. Assisted by the passage of H. R. 7225 in the last Congress, the program goes into effect July 1, 1957 provided states come up with matching funds and service agreements. The Public Assistance Medical Care Program is an extension of the present federal medical program in rehabilitation, crippled children and the like.

Much like the Dependents Medical Care Program, (Public Law 569), the Public Assistance Medical Care Program needs uniformity, fee schedules, contracts with medical societies and formal organization.

More People Covered

● Four categories come under the new program in what amounts to an extension of social security from cradle to the grave. AMA and most state medical associations opposed the original legislation.

State Medical Associations Alerted

● The Washington Office of the AMA has alerted all state medical associations and key medical personnel throughout the United States relative to this proposed program. Between now and next July 1, when the new program goes into effect, states will have to decide the extent to which they will participate. State medical associations will have to decide (1) whether they will ask the doctors to agree to a fee schedule, and if so, what type; (2) how to reimburse the doctors. In order to get started on the planning, a number of state welfare directors already are sounding out the medical organizations. Anyone desiring complete and detailed information on this program can obtain it by writing to the Council on Medical Service, at AMA, Chicago Headquarters.

How the Medical Profession Is Affected

● Medical care funds furnished under the new program, which goes into effect July 1, must be paid to the vendors or their agents by the states. It will be a formalized program. The states themselves will decide on the methods of contracting with and reimbursing physicians. These decisions by state welfare agencies will have an important impact on state medical associations and on the entire medical profession.

Public Service

THE TENNESSEE TEN

Fall Meeting Directs TV Study

● The Fall Meeting of the Public Service Committee held in Nashville October 21, resulted in the appointment of a sub-committee to study the needs of the Tennessee State Medical Association for television relations, to determine what will be needed in the future, and to make recommendations for the fullest and most intelligent use of the new medium.

Dr. William A. Garrott of Cleveland was named chairman of the sub-committee which will make the study and draw up a report between now and April, 1957.

Placement Film Gets Go Ahead

● The Public Service Committee also approved a plan for a twenty-eight minute motion picture to be used to encourage young physicians to practice in Tennessee's rural areas.

Active Program Needed

● It was pointed out at the meeting that if placement of physicians is to be achieved in rural areas of our state which do not have adequate medical services available, an active recruitment program will have to be carried out.

Doctors Being "Drawn Away"

● There are young physicians who would come to Tennessee and practice if they knew what the state has to offer. At present, those who might come here, or indeed, those who might stay here after they have graduated from one of our medical schools, are being drawn to other states.

Reluctant to Leave Medical Centers

● One major problem in difficult placement cases seems to be the reluctance of young physicians to leave the large medical centers. Their chief complaint seems to be that scientific medicine, such as they have been taught to practice, cannot be carried out in the rural areas where doctors are needed most.

Foundations and Hill-Burton Can Help

● This is, of course, a misconception. With the advent of Hill-Burton hospitals, and, recently, the Sears-Roebuck Foundation, it is now entirely possible for a young doctor to settle in any area in Tennessee and be assured of the proper clinic, laboratory, and hospital facilities to carry on medical practice of the highest quality. In addition, there is the willingness on the part of Tennesseans, to build a clinic to the doctor's specifications, if he will settle in their community. There are also the consultation services the Tennessee Medical Foundation and the Tennessee State Medical Association make available when help is needed in getting a community organized to solve its doctor shortage.

State Must Be Put Across

● Tennessee, with her lakes and waterways, her game and fish, her excellent schools and churches, needs to be put across to young doctors in other states as well as our own. They need to be shown what is available for them in the Volunteer State, and how they can serve. The active and successful placement service of the Virginia Council on Health and Medical Services is proof of what can be done in Tennessee.

Film to Get Message Across

● The film will serve to get Tennessee's message over to medical students, and to bring those who are interested in touch with our placement service. It will be the first step

in a concerted effort between the Tennessee State Medical Association and other interested groups to place doctors where they are needed most.

Correspondence Course for Assistants

● The Committee approved publication of a correspondence course for medical assistants. The course will serve as a supplement to classes in medical public relations offered each year by the Public Service Director in various sections of the state. It will be designed specifically for those employees of physicians who cannot attend the regularly scheduled classes. Full details, including cost and length of the course, will be announced.

Trustees Preview Film

● Immediately following the meeting, which was held at the Andrew Jackson Hotel in Nashville, the Committee had dinner and proceeded to the TSMA Office Building at 112 Louise Avenue for a preview of the new motion picture, "Battle Against Death" which was also seen by the TSMA Board of Trustees.

H. P. Contest Going Well

● Preliminary reports on the TSMA Woman's Auxiliary Health Project contest indicate a sharp increase in the number of participating high schools this year.

Auxiliary Chapters Should Act Now

● Mrs. Clarence Landham of Chattanooga, this year's contest chairman, reports that she receives inquiries on the contest almost daily. If schools are to enter the contest this year, it will be necessary for them to begin a project very soon, Mrs. Landham said. Auxiliary chapters should make a special effort to see to it that all high schools in their areas are contacted about the contest, she added.

Press Code Lauded

● The Press-Scimitar praised the new Press Code of the Memphis and Shelby County Medical Society in a September editorial which reads as follows:

"Who wants doctors to be publicity-seekers? No one, newspapermen least of all.

Who wants doctors to be frank and candid with the public and give them all the information to which they are entitled? Nearly everyone, we should think.

The new code of the Memphis and Shelby County Medical Association accomplishes this.

It provides that doctors shall have all the freedom any citizens have of speaking up as a private individual 'in public controversies or political discussion or debate.'

Doctors needn't shy away from photographers—but they are admonished against 'a frequency of such photographs as bespeaks self-exploitation.'

Provision is made for a standing group of spokesmen for the medical profession, 'available at all times to all media of public information.' If besides these spokesmen, further opinion is desired, either the Medical Society president, its immediate past president or its president-elect may designate someone to give this opinion.

As an individual physician, each doctor is instructed to give information to the press as follows:

'In cases of accident or other emergency; illness of a public personality; and in cases of unusual injury, illness or treatment, any scientific information which will lead to better public understanding of the progress of medical science.

When information concerning a specific patient is asked, the physician shall obtain the consent of patient before releasing it.

And, the physician shall use good taste regarding the use of his own name in connection with such reports.'

This 'Guide to Co-operation,' as it is called, is a reasonable code, and the medical profession in Memphis and Shelby—and the public—are to be congratulated on it."

only been found once and was not very striking; but, for what it's worth. it is present.

A third group is the chemical or physical form, sulfonamides, for example, being a not infrequent offender in causing myocarditis. And finally, there is the isolated form of myocarditis, which is unassociated with any other known disease; and that, I am afraid, is what we are going to end up with here. This is a picture which we might well call Fiedler's myocarditis. It is something like Dr. Fiedler described,[2] and the term has, by general usage, come to mean any myocarditis that you can't put a name on. The disease that Fiedler reported was an acute inflammation of the myocardium in young people. It was usually abrupt in onset, frequently announced by chills, characterized by severe failure, and usually followed by death. At postmortem, he found an interstitial myocarditis and involvement of the fibers themselves. The original report was in 1899. There have been a great many cases recorded since then, which have been reviewed on numerous occasions. Each time somebody reviewed them, somebody else came along and pointed out that half the cases under consideration didn't really fit the criteria for Fiedler's myocarditis. They usually, if they looked hard. found some sort of a bacterial or viral episode beforehand, or a toxic episode, or something they could blame the myocarditis on. However, we have made a careful search for possible causes of her myocarditis; and in the absence of any definite etiological agent, I feel that we are justified in calling this Fiedler's Isolated Myocarditis.

Incidentally, a common postmortem finding in this condition has been mural thrombi. Perhaps emboli from such thrombi might explain the patient's abdominal complaints.

DR. I. FRANK TULLIS: Dr. Morton, would you comment on the murmurs?

DR. RALPH F. MORTON: The apical diastolic murmur of relative mitral stenosis (Austin Flint murmur) occurring in the presence of free aortic regurgitation is well-known to most physicians. It is not such common knowledge, however, that a similar murmur, mid-diastolic rumble or presystolic murmur, may be heard with heart disease in the absence of aortic insufficiency, mitral stenosis or any other valve involvement. Not infrequently the diagnosis of mitral stenosis has been made erroneously because a mitral diastolic murmur was heard in the absence of free aortic regurgitation.

In 1935, White, Jones, and Bland[3] reported autopsy findings in 100 cases of rheumatic heart disease; all of these patients died during a period of rheumatic activity. In this group the diagnosis of mitral stenosis was made 68 times, yet only 23 patients actually had mitral stenosis at postmortem. Not infrequently patients having active rheumatic carditis have been noted to have mitral systolic as well as diastolic murmurs, but with the passage of time all evidence of valvular disease has disappeared. Apical diastolic murmurs occurring in the absence of valvular disease have been reported in patients with myocarditis of varying etiology, hypertensive heart disease, arteriosclerotic heart disease, constrictive pericarditis, and cardiac dilatation due to severe anemia.

It is our impression that the evanescent apical diastolic murmur noted in the subject of our discussion was due to relative mitral stenosis. The murmur was heard and demonstrated phonocardiographically during the period of greatest cardiac dilatation. Its subsequent disappearance and reappearance coincided with decrease and increase of heart size.

DR. J. WARREN KYLE: I believe I would rather classify this patient as idiopathic heart disease. When you get it down to Fiedler's myocarditis there is a residue of rare heart diseases that can't be ruled out without postmortem, for example, endocardial fibrosis, amyloid disease of the heart, and perhaps idiopathic myocardial hypertrophy. So I think those ought to be considered. There are some things a little against the myocarditis, especially the absence of fever and increased "sed." rate.

DR. A. B. WEIR: It's a minor point as far as this patient is concerned, but textbooks and recent articles discuss the help offered in the diagnosis of rheumatic fever by the ESR and C-reactive protein determinations. We recently reviewed some of these which pointed out that sedimentation rate is unlikely to be helpful in rheumatic fever in

which there is congestive failure, because the sedimentation rate is brought toward normal by congestive failure. I have never seen documentary study to prove this point, and I mention it only because I wonder if it actually does happen. We are now in the process of studying this on the wards.

DR. KYLE: I have some experience on that point. We did a large number of tests on patients with miscellaneous diseases in a study of cancer tests, and sedimentation rate was one of them. Congestive failure has a fairly high incidence of increased sedimentation rate. It's not uniformly increased by any means, but I would say it's highly unreliable in congestive failure. It may or may not be increased. Of course, there's always the question of other inflammatory disease, but even so I think it's pretty unreliable.

DR. STERN: I went very quickly and didn't even mention such things as amyloid or sarcoid. We did consider them, of course. We did get a Congo Red test, which we wouldn't expect to be positive in primary amyloid. If this is primary amyloid of the heart, as Dr. Kyle suggested, the only way we're going to find out about it is at postmortem. She has no evidence of primary amyloid elsewhere, but of course that's not at all necessary. Actually we just went down the list of every rare disease of the heart in our differential diagnosis.

DR. JOHN EDMONSON: Does amyloid disease of the heart respond to steroids, Prednisilone?

DR. STERN: I don't know the answer to that, Dr. Edmonson; but I would not expect a response. I don't think we can say for certain that this patient actually responded to Prednisilone. As I recall it was our third try with Prednisilone that was followed by improvement. The first two times we tried it she did not respond, and it took a lot of treatment before she started to get better. This does not mean that Prednisilone was not responsible for improvement, but on the other hand the improvement may have been extra-cardiac. As you know, steroids have been reported of value in intractable failure even due to hypertension and arteriosclerosis.

DR. TULLIS: Dr. Stern, I've been a little surprised that we've felt as confident as we seemed to have felt in excluding rheumatic myocarditis. Rheumatic myocarditis, I believe, has been reported as distinctly confirmed at autopsy with no fever and with perfectly normal sedimentation rates. Statistically, isn't that a little bit more common in this group of atypical myocarditis, or isolated or idiopathic myocarditis, than is the Fiedler's variety?

DR. STERN: Actually, I haven't seen any comparison of the two, Dr. Tullis; but in the reports that I have seen rheumatic fever has not been statistically prominent at autopsy among those cases of myocarditis that had no etiologic diagnosis during life. I'm not really rapidly or easily discarding rheumatic fever; I think it's extremely difficult to make a positive diagnosis of rheumatic myocarditis here. Perhaps it would be better if I would say that my diagnosis is an isolated myocarditis of unknown etiology. It may turn out to be post-viral, it may turn out to be rheumatic, but at present I think all we can say is that we don't know what causes it.

DR. KYLE: I think if you're ever going to use the antistreptolysin titer in an argument, this is one place you can do it. I think the fact that it's not elevated is fairly strong evidence to exclude rheumatic myocarditis.

DR. STERN: Of course we know that rheumatic myocarditis can simmer along for long periods of time and might possibly be of low grade, but whatever she had was not low grade. She had fulminating disease. She became very rapidly very sick and almost died. I would be discouraged in not having an elevated ASO titer, if I were going to diagnose rheumatic fever here.

DR. TULLIS: Any other comments?

DR. FRANK PRESTON: Do we have documentary evidence of her heart size earlier in her life?

DR. MORTON: This patient had a 70 mm. chest film in 1955 which said that it was normal; and I believe that if she had had much enlargement they would have commented. In addition. back in 1940 she had a chest X-ray which does not comment specifically about the heart, but I believe again

that if it were enlarged they would have said so.

DR. TULLIS: Any other comments? I'd like to thank Dr. Carroll and Dr. Stern and Dr. Morton and all the others who took part in this interesting session. We stand adjourned.

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President's Letter



Dr. Wood

How often do we see reference to the "good old days"? Medically, do you ever wish for such? I dare say that scientifically no one would dare think of reverting to the routine therapies of even 25 years ago. Yet certain fringe elements have become part of present day activities that often consumes much time and energy that once was devoted to patient care. They are, however, necessary contributions to modern medical life, especially to the socio-economical contributions of community welfare and the political, cultural and educational advancement of the profession.

Within the past month, we will have witnessed many events. The election of a president after a long, exhausting tirade of name calling by personalities whose official positions should lead the average person to expect a role of slightly superior quality and a more lofty demeanor.

Such feelings of disappointment in other fields are, however, compensated by activities viewed in the professional lives of men and women devoted to the cause of healing the sick. We were fortunate in hearing the excellent scientific papers of the Kentucky State Meeting and of the Tennessee Valley Assembly. We watched the celebration of the Golden Anniversary of the Southern Medical Association. We heard the contributions to the program of the Officers' Conference in Nashville and saw the coordinated efforts of the House of Delegates in their attempt to aid the Federal Government in rendering Medical Service to dependents of men in the Armed Forces. We listened to the Board of Trustees of the State Association set up plans for a Memorial Trust Fund, set up a Budget for 1957 and see a preview of "Battle against Death,"—our first movie effort and made by the Public Service Committee as an educational aid to promote our State Indigent Program. We were privileged to sit in the House of Delegates of the Virginia Association, hear their plans for a large State Headquarters building—and make a generous raise in their quota for medical education.

Within the month, I have seen many busy people, none of whom, however, surpass the energy and work being generated by the Women's Auxiliary in the Health Project Contest Committee under the leadership of Mrs. Elsye Landham, aided and abetted by Mrs. Elmer Pearson, the State President. We feel safe in predicting the April meeting will witness an all time high in productivity.

We view with interest the combined efforts of the Tennessee Health Department and the University of Tennessee Medical School in Memphis in beginning an educational program for the rural hospitals in counties adjoining Shelby, devoted to consultative help in nursing care, in records and in consultative help in pathological, roentgenological and electrocardiographic interpretations.

We see the shifting scenes of the years—they depict radical departures from the yesteryears. Changes in philosophies, in techniques, in treatment and in problems, but we would not want to go back—even for a visit.

R P Blood M.D.

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NOVEMBER, 1956

EDITORIAL

BARBITURATE POISONING

The treatment of patients with barbiturate poisoning has changed many times during the past twenty years. The latest evidence has been summarized by Eckenhoff and Dam[1] and includes both American and European experiences.

No matter what method of therapy is used, some patients will succumb after ingesting large amounts of barbiturates. Those factors which adversely affect recovery include the time interval elapsing before treatment is begun, the dose ingested, the rapidity of absorption of this dose, tissue damage secondary to anoxia, and concommitant ingestion of other depressants, for example, alcohol. The mechanism of the synergism of alcohol and usually sublethal doses of barbiturates has not been fully explained.

Supportive therapy is advocated by all authors. The principles of this type of treatment can be outlined as follows:

Respiration. A patent airway must be maintained. Endotracheal intubation or tracheostomy is often necessary to prevent soft tissue obstruction and to achieve meticulous removal of secretions. During coma oxygen, of course, is important.

Circulation. After adequate pulmonary exchange is established, attention is directed to the circulation. Intravenous infusions of dextrose in saline and water are given. Plasma expanders may be useful, and vasopressor drugs to maintain an adequate blood pressure are sometimes necessary.

Gastric Lavage. Since much unabsorbed drug may be present in the stomach, lavage with a large bore tube is essential. Aspiration of gastric contents into the lungs is dangerous and great care must be taken to prevent this calamity.

Finally, the use of antibiotics, indwelling catheter, and maintenance of good eye and oral hygiene are important adjuncts in supportive therapy.

Those who advocate the additional use of stimulant drugs also subscribe to the use of supportive therapy. They, however, believe that such analeptic drugs as nikethamide, amphetamine, Metrazol, caffeine and picrotoxin help these patients. Although the bulk of evidence does not support this contention, it is possible that such drugs may be useful in the severely poisoned patient who also has received good supportive therapy.

There are certain dangers associated with the use of analeptics. They are convulsions, vomiting with aspiration of gastric contents, and cardiac arrhythmias.

Convulsions occur in as many as 20 per cent of the patients treated with picrotoxin. The convulsions are not only dangerous in themselves but may cause irreparable damage to the brain during anoxia by increasing cerebral demand for oxygen in excess of available oxygen supply.

Vomiting with possible aspiration of gastric contents is relatively common following the use of stimulant drugs. Abnormalities of cardiac rhythm are prone to occur in patients with barbiturate poison-

[1]Eckenhoff, J. E. and Dam, W.: The Treatment of Barbiturate Poisoning with or without Analeptics, Am. J. of Med. 20:912, 1956.

ing. Such drugs as picrotoxin, amphetamine and caffeine appear to increase the possibility of a fatal arrhythmia.

It is apparent that the decision to use analeptic drugs carries with it the risk of additional danger to the patient. On the basis of available evidence, supportive therapy alone is the method of choice in treating barbiturate poisoning.

A. B. S.

★

ACCIDENT PREVENTION FOR CHILDREN

About a year ago the Accident Prevention Committee of the Tennessee Chapter of the American Academy of Pediatrics sponsored, through the Parents and Teachers Association throughout the State, an Accident Prevention Poster Contest. The purpose of the contest was to direct attention to the morbidity and mortality in school-age children, or younger of some preventable accidents. The poster contest was educational not only to the children but equally, if not more so, to parents.

The contest clearly appears to have been a successful one, since 106 posters were entered in the contest. Thirteen of the fifteen P.T.A. districts were represented and winners among the posters represented thirty-three school systems. As a result of this program, Accident Prevention Committees have been established in Chattanooga, Jackson, Knoxville, Memphis, and Nashville.

This editorial note is to acquaint the medical profession of this educational program. When and if you are called upon to help the P.T.A. in your community on the educational aspects of accident prevention, you should be ready to respond with your time, information and advice.

R. H. K.

★

PROFESSORS IN THE PRIVATE PRACTICE OF MEDICINE

The Committee on Medical and Related Facilities of the A.M.A. has been studying this problem with the cooperation of an Advisory Committee made up of representatives of the A.M.A. and of the Association of American Medical Colleges.

Historical perspective is helpful here as in most problems. Your Editor grew up in a small university town which had a medical college. Organized medicine was not much organized then, and medical practice was pretty much *laissez-faire*. The professors were at least as interested in practice, if not more so, than in teaching. It may be guessed that the "professor" behind a pair of spanking grays with glittering harness, and later in a brass-bound Pierce-Arrow, with a chauffeur in leather cap, goggles and linen duster, had an advantage over his professional brother and got the cream of the practice. Then came the Flexner Report and the A.M.A. purge of the inadequate medical schools. These men were replaced by full-time men who either walked on foot or rode in Model T Fords,—this marked my Alma Mater. In the twenties and thirties began the trend to a modification of "full-time" and some practice by the teachers leading to the present discussions.

In essence one side of the question is pretty much as follows: (1) "professors" have an advantage in competitive practice over their nonacademic confreres because of their position; (2) "professors" are unethical in advertising through "making" the newspapers by their scientific or other activities; (3) "professors" are unethical if some of their income from practice goes to the school,—the corporate practice of medicine; and (4) in *tax supported schools*, private practice constitutes a form of socialized medicine, the teacher being paid by the taxpayer who also pays his office expenses.

On the other side one finds these arguments: (1) it is said that a teacher is a better teacher of medical students if he must give thought to the personal wants of the patient and his family to balance the more impersonal practice on the wards with staff and indigent patients; (2) the financial plight of the medical schools forces deans to permit the clinical faculty some outside income so they can spread the stationary salary budget farther in raising the salaries of preclinical faculty to meet inflated living costs; (3) many on both sides feel that special technics developed by research in medical schools should be available to *all* the public when their clinical application is es-

tablished, and that specialized knowledge accumulated by intensive study of some phase of medicine should be available to *all* persons through consultation.

The problem now is, how can these conflicting viewpoints be melded, if, indeed, they can be? The whole situation is so complex that many paradoxes arise.

The "advertising" angle may be both amusing and irritating. Organized medicine urges better "press relations," and "codes" are set up for reporters and doctors. Much is said about a public hungry for medical news and that it will not be denied. The publicity-shy "professor" takes part in a postgraduate program of organized medicine in a distant state or city. Knowing his own medical society urges better press relations, he unwillingly permits his host at the meeting to lead him to the press for queries and may even permit a news-photo. He arrives home to find the press has forwarded the news item to the home paper, and his not too friendly "friends" gibe him unmercifully about "advertising." Less amusing is the "advertising" that is forced on a teacher if he has received research funds donated by local agencies and is made by courtesy alone to lend himself to publicity. Lastly, there is the inevitable newsbeat that digs up and often garbles some real newsworthy event that happened in a medical school, whose reporting leaves an unpleasant taste in everyone's mouth.

The advantages in competition and specialized knowledge often go hand in hand. Much can be said pro and con on this subject. Should this specialized knowledge acquired through study in the laboratory, in the dog-surgery or in the clinical experiment be made available to the public generally,—some say *yes* and some say *no!* If one says yes, it leads to curious problems. One strong opponent to "professors" practicing in his state school said, "Yes, but should be done without a fee." He was nonplussed by the suggestion that a state employee operating without fee on a well-to-do patient would be engaging in socialized medicine. Here is a real paradox.

With the passage of years the full-time teacher has become looked upon with askance. Here was a white-coated figure who spent his time between the laboratory with his guinea pigs and the ward with its "human guinea pigs,"—who had a cold biologic attitude, and who lacked the personal touch and sympathy that must always be part of the doctor. Was this the man to teach and influence the undergraduate! Recognizing this Dr. Arthur Dean Bevan on the A.M.A. Council on Medical Education and Hospitals said in 1928, "Uprooted from the medical profession, uprooted from the community and transplanted to the scientifically prepared soil of the university campus, the medical school will lack those things which the medical profession in the community alone can give." But the full-time man with his closer, more prolonged and administrative contact with students still influences the student most, and therefore many, both in "town and gown," feel he should bear the responsibilities of some private patients to make him a better teacher of doctors. Though the teacher may dislike being "bothered" by patients there is something to be said for this. In addition to the effect on his teaching, your Editor feels strongly it promotes something still more intangible and not mentioned before. It is his belief and observation that the teacher consulting with the referring physician makes for an infinitely better relationship between the practicing physician and the one with greater interests in the purely scientific aspects of medicine. This redounds to the referring physician in terms of postgraduate instruction and to the consultant in a greater breadth of understanding of the problems of the practitioner. This can not be gainsaid.

The item of financial aid derived from private practice is simple arithmetic and the basic law of supply and demand. Even though the teacher may be a "starry-eyed" idealist, he and his family must eat, and the wife of an M.D. may not be too sympathetic to a career in a laboratory. The teacher's income, though not equal to the practitioner's, must reduce the differential between private practice and an academic life. The budgets of the private schools are plainly inadequate to meet these needs,—note the numbers of men leaving the preclinical fields to join the pharmaceutical houses in research. Even the deans of tax-

supported schools cannot "sell" their Board of Trustees and general faculty that an M.D. professor of surgery should get two times the salary of the Ph.D. professor of English or French.

Since these white-coated men might become dazzled by the dollar and neglect teaching duties, they are usually hedged by ceilings to income, that portion above a certain level reverting to the school. This is the basis for the complaint of "corporate practice of medicine." These funds are generally utilized, to your Editor's knowledge, by the respective departments for underwriting research, hospitalizing indigents for study, supporting a departmental library, or paying the resident's expenses to a medical meeting.

And what is the answer to this complex problem? In the appendix of twenty pages attached to the report on the Private Practice by Medical School Faculty Members, prepared for the A.M.A. House of Delegates are suggestions:—(a) from medical school deans; (b) from state medical associations; and (c) from county medical societies. These represent confusion compounded with one unrealistic thread consistently running through the suggestions;—namely, to pay adequate salaries to full-time teachers, though none suggest from where the money is to come.

In view of the dozens of suggestions your Editor offers the following plan which, *if feasible*, might solve the whole problem.

(1) All physicians must be treated alike, therefore, scrap all "new codes," permitting the name of *no* M.D. to appear in the newspaper, nor should he appear on TV or radio. All news items should be impersonal and be issued by medical societies. For example, the A.M.A. would announce that a physician in a medical school of this County has perfected a vaccine to prevent polio. The name would be kept out of the papers until the Nobel Prize Award at least. (No officer in organized medicine should speak in his own name, since, from the mutterings of some of his confreres, he has prestige by virtue of his office. Any pronouncement should be couched in, "The Blank County Medical Society feels that . . .") (2) Full-time teachers may see only patients who have been referred by a practicing physician. (This is presently the custom in over 50 per cent of the schools permitting practice.) This makes available to *all* the public special technics and knowledge gained in research. However, in states where feeling is strong on the subject, the state association could declare such practice unethical. The referring physician would be as unethical as the practicing teacher,—equally as guilty as two doctors splitting fees for example, and both could be called before the Ethics Committee. Thereby the teacher would be freed from undue pressure to consult on patients. *In such states the Association would assume responsibility for obtaining funds for adequate full-time salaries.* (3) The last question of "corporate practice" could be resolved by the deans turning over to the A.M.E.F. all fees collected above the permitted ceiling. These funds could be earmarked for the school. Such monies clearing through an A.M.A. agency would be no different than those donated to the A.M.E.F. by any doctor.

Your Editor believes that these three points agreed upon by the dean's organization and the A.M.A. conceivably might solve the thorny riddle. If not, your Editor offers the following alternative choice.

(1) The Federal government should be urged to pay adequate salaries of full-time teachers; this would fulfill the suggestions made by many county societies and state associations. This would relieve deans of their major problem, and relieve all teachers of the need of practice. It would help to fill the numerous vacant teaching positions for which there are no "takers." (2) As government employees they would be forbidden all practice except in the case of indigents, since practice on others would be socialized medicine. HEW could publicize advances in medicine without any qualms. If, after years in dog-surgery, another Blalock developed a technic of benefit to children or others it might be used *only* for staff patients. Others would have to wait a few years until the professor-trained residents are established in practice. The new hormonal assay or other biochemical method developed in the school laboratory and interpretable in consultation practice just would not be available until the technical skill and intricate apparatus built

in the school could be reproduced in the private hospital. The only exception, of course, would be that doctors or members of their families could, as nonpaying patients, have the benefit of their confrere's knowledge and skill.

With all the *implications*, this plan would solve *everything!* Few in academic or organized medicine would welcome a Federal finger in resolving this troublesome question. Therefore, to again quote Dr. Bevan, "This great function of medicine (teaching) can be developed in the best way only by the cooperation of all the factors involved, the community, the medical profession and the university. . . . We must not permit a line of cleavage, a schism, to develop between the medical profession and the medical teachers in our university schools of medicine." Here is a knotty problem that must be faced *realistically* by all involved in its solution.

R. H. K.

DEATHS

Dr. T. B. Yancy, 78, Kingsport, died September 23rd at his home. Dr. Yancy established the first Public Health Unit east of Knoxville in the State.

Dr. James Douglas Laurence McPheeters, 68, Chattanooga, died October 4th at a hospital while undergoing surgery. Dr. McPheeters was a past-president of the Chattanooga-Hamilton County Medical Society.

Dr. Benjamin Franklin Gates, 94, Cleveland, died September 29th in a Cleveland hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The October meeting of the Society was held in conjunction with the annual meeting of the Tennessee Valley Medical Assembly conducted at the Read House Hotel on October 1 and 2. Members of the Society and physicians from 25 states attended the two day meeting. An honor guest and one of the speakers was Dr. Dwight Murray, President of the American Medical Association.

Dyer-Lake-Crockett County Medical Society

The September 5th meeting was held in the Cordell Hull Hotel in Dyersburg. Following dinner, a business meeting was conducted with Dr. Oren Landrum presiding. The scientific program consisted of a paper, presented by Dr. R. M. Poole of Memphis, entitled "Recent Advances in the Diagnosis and Treatment of Thyroid Disease."

The Society voted to hold its October 10th meeting in conjunction with the Postgraduate Education symposium on Cancer presented by the Postgraduate Education Committee of the Tennessee State Medical Association.

Washington-Carter-Unicoi County Medical Society

A Cancer Symposium on "Pelvic Malignancies in the Female" was sponsored by the Tri-County Medical Society and the Washington County Unit of the Tennessee Division of the American Cancer Society, on October 4th. The meeting was held at the Johnson City Country Club. The program was as follows: "Carcinoma of the Vagina" by Dr. Leonard Palumbo, University of North Carolina School of Medicine; "Carcinoma of the Ovary" by Dr. Roy Parker, Duke University School of Medicine; "Carcinoma of the Vulva" by Dr. Frank Lock, Bowman-Gray School of Medicine; "Carcinoma of the Cervix" by Dr. Norman Thornton, University of Virginia School of Medicine; and "Radiation and Radioisotope Therapy of Pelvic Tumors" by Dr. Frank Comas, Oak Ridge Institute of Nuclear Studies. The papers were followed by a Round Table discussion with Dr. Thornton acting as Moderator.

Nashville Academy of Medicine and Davidson County Medical Society

The Society met on October 9 at Vanderbilt Hospital where dinner was served to the attending members. The scientific program was presented by Dr. Amos Christie and members of the Vanderbilt Pediatric Staff. Patients were shown to illustrate the subject, "Some Interesting Pediatric Diagnostic Problems."

Smith County Medical Society

The Society met in the County Hospital on October 5 and heard three Nashville physicians give an interesting discussion on "Low Back Pain." The speakers were: Dr. Carter P. Williams, Dr. J. W. Hillman and Dr. Arthur Brooks.

Consolidated Medical Assembly

The Consolidated Medical Assembly of West Tennessee held its regular monthly meeting on October 2 in the New Southern Hotel in Jackson. The scientific program was presented by five University of Tennessee Medical School Staff members, who were as follows: Dr. Earl L. Wren, Jr. spoke on "Surgical Conditions in Childhood—Hydrocele, Hernia, etc." Dr. Robert G. Jordan spoke on "Mental Deficiency." Dr. F. Thomas Mitchell's subject was "Jaundice in the Newborn and Infant." Dr. Albert M. Hand discussed "Hepatitis in Early Infancy." Dr. James M. Etteldorg spoke on "Treatment of Hypertension in Children."

Knoxville Academy of Medicine

The Society held its regular meeting in the Academy of Medicine building on October 9. An interesting case report was given by Dr. Walter H. Benedict. Dr. G. Turner Howard, Jr. showed a movie on "Repair of Hair Lip." Dr. Jack Chesney spoke on, "Changing Mortality in Pediatric Patients." The discussion was led by Dr. Richard B. Willingham.

NATIONAL NEWS

Medical Care for Dependents of Service Personnel

The Medical Care Program for dependents of service personnel is moving ahead, and will go into effect December 8. The Department of Defense has completed work on a directive to the services, decided to allocate the hospital care contracts on a regional basis, and is planning to invite state medical society representatives to Washington to work out state by state arrangements for the medical care part of the operation. This program, and its implications, can have far-reaching effects, and every physician should acquaint himself with the details. Developments, as of this date, are offered for your information:

1. Representatives of state medical societies will be invited to Washington to assist the Department of Defense in working out individual contracts covering medical care of service dependents in each state.

2. Prior to meeting with state medical society representatives, the Defense Department Task Force has worked out a model state contract.

3. By the end of October, all state societies are expected to have agreed on basic details of the kind of medical care program they are prepared to operate. They will also have decided on their disbursing agents and will be well along in their efforts to develop acceptable fee schedules.

4. The Department of Defense has decided to divide up the hospital care phase of the program (distinct from medical care) on a regional basis, with probably four of the six Army Areas made the responsibility of Blue Cross and the remaining two the responsibility of commercial insurance companies.

5. The Secretary of Defense has issued a directive embodying the department's concept of the law and general instructions on how the services will implement the law. The directive indicates what kind of care is to be provided in military and civilian facilities, under what circumstances, how dependents will be identified, types of outpatient care to be provided in military and civilian facilities, etc.

6. After a few more details have been settled, the Defense Department, in cooperation with the Department of Health, Education, and Welfare, will issue regulations covering all aspects of the program. This will provide the final and official guide for contract negotiations.

The Month in Washington

In addition to helping states make monthly public assistance payments to certain indigent persons, the Federal government for a number of years also has contributed to the cost of their medical care. Because the grants formula is somewhat complicated, and the amount of medical care varies with the states, this U. S. contribution cannot be fixed definitely. It is estimated at about 90 million dollars a year.

About a third of the states now deposit these Federal grants—which must be matched 50-50—in a separate fund, from which the medical care costs are paid directly to the vendors, such as physicians, dentists, hospitals, nursing homes and druggists. The remaining two-thirds include medical care costs in monthly checks to the indigent, and expect these people to pay their own medical bills.

But beginning next July 1, this U. S.-state medical care arrangement is going to be drastically altered.

For one thing, the U. S. will increase its payments from the current $90 million a year to between $200 million and $300 million. For another, *all* medical care money under the new program will be put into a separate fund, from which the indigents' medical bills will be paid, in one way or another, by the state itself.

It is true that in some states the new program will not have much effect. This will be the case with those states that already have a substantial medical care program and see no reason for increasing it and with those unable to raise the matching money.

But the amount of money potentially available to each state is significant, and in most states the change-over from the old to the new systems will

have an important effect on physicians and other vendors of medical care. For example, eight states will have "new" medical care funds in excess of 10 million dollars, if they put up half the money. California's potential fund is $27 million and New York's and Texas' more than $18 million each.

Before state welfare directors can start operating under the new program they will have to decide, (a) whether they will require doctors to agree to a fee schedule, if one is not already in operation in their indigent care program, and (b) how the doctors will be reimbursed (whether through their societies or other mechanisms, or directly by the government). Some state welfare officials already have approached state medical societies to talk over the situation.

(U. S. contributes to indigents in only four categories—the aged, dependent children, the blind and the disabled. For their medical care, it will offer states $3 per month for each adult and $1.50 for each child, money which the state must match. It is out of these funds that payments will be made for medical care.) (From AMA Washington Office)

MEDICAL NEWS IN TENNESSEE

Tennessee Valley Medical Assembly

The two day assembly held on October 1 and 2 at the Read House in Chattanooga attracted 697 doctors from 25 states and one foreign country. The Assembly was sponsored by the Chattanooga-Hamilton County Medical Society.

Internal Medicine Society Formed at Knoxville

Some 35 physicians of Tennessee, Virginia and Kentucky have formed the Knoxville Society of Internal Medicine. Dr. William A. Nelson has been named as the first President of the group. Other officers are Dr. Harold Neuenschwander, Vice-President and Dr. Frank London, Secretary and Dr. Kenneth Hicks, Treasurer. Dr. Charles Sienknecht and Dr. Julian Lentz were elected to the executive council. Dr. Samuel P. Asper, Associate Professor of Medicine at the Johns Hopkins University Medical School, was the speaker at the inaugural meeting. His subject was "Recent Advances in Thyroid Physiology and Therapeutics."

Dr. Nelson stated that the Society had been established to help maintain standards of practice and encourage postgraduate education and research in internal medicine. The Society will meet four times a year.

Symposium on Office Procedures

The Tennessee Chapter of the American Academy of General Practice sponsored a one-day symposium on "Office Procedures" on September 30 at the Peabody Hotel in Memphis. The meeting featured outstanding speakers from over the nation. Doctors from throughout the state attended the meeting. Speakers were: Dr. Harry L. Alexander, Washington University School of Medicine, St. Louis—"Modern Detection in Treatment of the Allergic Patient"; Dr. Harold A. Sofield, Northwestern University School of Medicine, Chicago,—"Office Orthopedics"; Dr. Francis L. Ilg, Gesell Institute of Child Development, New Haven, Conn.,—"Recognition of Behavior Problems in Children." Dr. Robert A. Davison of Memphis served as Chairman and Dr. Frank L. Roberts, associate dean of the University of Tennessee College of Medicine was the luncheon speaker. Other speakers included, Dr. Philip C. Schreier, University of Tennessee College of Medicine,—"Office Gynecology"; Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn.—"Office Proctology," and Dr. L. Kraeer Ferguson, Woman's Medical College of Pennsylvania, Philadelphia, "Office Surgery."

Southern Medical Association Golden Anniversary

Two hundred physicians and surgeons and their wives met at the Read House in Chattanooga on October 2 to celebrate the Fiftieth Anniversary of the Southern Medical Association. Mr. C. J. Loranz of Birmingham presided at the meeting.

University of Tennessee College of Medicine

Out of the 201 new Tennessee students admitted to the nation's medical schools last year, 158 or 78.6 per cent are attending the University of Tennessee College of Medicine in Memphis. The figures were compiled for the 1955-1956 academic year by the A.M.A.'s Council on Medical Education and Hospitals.

The largest number of students, 21, not enrolled at U.T. are attending Vanderbilt

University School of Medicine. Eight are at Meharry Medical College, Nashville, and two at Howard University School of Medicine, Washington, D. C. The remaining 12 students from Tennessee are enrolled at medical schools throughout the country.

★

A psychologist has been awarded a $25,000 grant for five years of research which may lead to more information on X-ray exposures of expectant mothers without mental harm to their children. The award was made by the National Institute of Mental Health.

★

An intensive study of Tennessee Children affected with epilepsy is one of the principal aims of the Children's Convulsive Seizure Clinic opened at the College of Medicine. A grant of $7700 has been awarded for the study. Approximately 1,000 children in the pediatric clinic of the John Gaston Hospital will be given comprehensive diagnosis and treatment as part of the program.

★

A Memphis woman, who asked that her name be withheld, has contributed $1,000 to the new Children's Convulsive Seizure Clinic in memory of her son, who had epilepsy. The clinic is limited to patients of the City of Memphis Hospitals. It is estimated that 1,000 children in the city and county are eligible for treatment in the clinic which serves two purposes—the comprehensive diagnosis and treatment for children with convulsive seizures and intensive study of such children.

★

The cancer or blood disease research program of the College has been strengthened by a bequest of $2,000 from the will of the late Miss Sarah Sheffler.

★

Dr. Robert C. Rendtorff, Department of Preventive Medicine, has been awarded a $33,623 three-year research grant by the National Institute of Allergy and Infectious Diseases of the U.S.P.H.S. to study virus and parasite relationships.

★

Dr. George Barlow, of Clinical Physiology, has been awarded a research grant from the National Heart Institute of the U.S.P.H.S. for "A Physiological Study of Hyperpyrexia in Dogs and Monkeys." The $51,675.00 award is for a five year period.

★

Dr. John Q. Adams, of the Department of Obstetrics and Gynecology, and Dr. Richard R. Overman, of Clinical Physiology, have been awarded a research grant from the National Institute of the U.S.P.H.S. to study the "Role of Posterior Pituitary in the Toxemias of Pregnancy." The $16,675.00 award is for a two-year period.

★

Dr. I. Frank Tullis, of the Division of Medicine, has been awarded a grant of $3,000 from the Lederle Laboratories for the clinical evaluation of a new drug, Kynex, a preparation related to the "sulfa drugs."

Vanderbilt University School of Medicine

A five-day postgraduate course under the auspices of the American College of Physicians was given during October, Dr. Hugh J. Morgan, Past-President of the College being the director. The course was attended by forty internists from many points of the country.

PERSONAL NEWS

Dr. Carl Henry, Kingston, has announced that **Dr. Carl James Huffmeister** of Cookeville has moved to Kingston to become associated with him in the practice of medicine.

Dr. James M. Willett, Elizabethton, recently addressed the Woman's Civic Club.

Dr. William Carter Keeton, Hohenwald, has announced the opening of his office for the practice of medicine. He will be associated with **Dr. W. E. Boyce.**

Dr. D. C. King and **Dr. H. W. Thomas** of Henderson recently purchased the Steadman-Guy Clinic and will operate it under the name of the Henderson Clinic.

Dr. Ralph L. Brickell, Jr., and **Dr. Wilfred L. Wiser,** Tullahoma, have announced the opening of the Brickell-Wiser Clinic for the practice of medicine and surgery.

Dr. R. B. Turnbull, Memphis, has been elected Vice-President of the Southern Trudeau Society.

Dr. R. M. McCown, Jefferson City, was recently honored for his 35 years of service to the Carson-Newman football squad.

Dr. H. H. Barham has moved to Bolivar to be associated in the practice of medicine with **Dr. D. L. Brint** at the Brint Hospital.

Dr. Carey Bringle, Memphis, is the new Presi-

dent of the Memphis Obstetrical and Gynecological Society. He succeeds **Dr. John Redmon.** Other new officers are **Dr. William Mackey,** Vice-President; **Dr. Robert Ruch,** Secretary.

Dr. W. G. Rhea, Paris, recently attended the American College of Surgeons meeting in San Francisco.

Dr. James M. Tuholski, Memphis, has been named Assistant Director of Clinical Research for Mead Johnson & Co.

Dr. Max E. Painter, formerly of Gallatin, has returned to Lafayette to become associated with **Dr. E. M. Froedge** of the Froedge Clinic.

Dr. Kenneth L. Roark is taking up practice of medicine and surgery in Elizabethton.

The following physicians are among those recently honored at the University of Tennessee Medical Unit at commencement exercises. They were: **Dr. John S. Freeman,** Springfield; **Dr. Robert L. Wylie,** Scotts Hill; **Dr. Riley J. Ingle,** Sevierville; **Dr. E. A. Guynes,** Fountain City; **Dr. G. T. Scott,** Brownsville and **Dr. R. M. McCown,** Jefferson City.

ABSTRACTS OF CURRENT LITERATURE

Medical Therapy of Occlusive Arterial Disease. Kvale, Walter F.: Dis. Chest 30:243, 1956.

The author states that it is difficult for one investigator to evaluate completely all of the methods of treatment of occlusive arterial disease that have been proposed in recent years. Clinical improvement does not always parallel the evidence derived from physiologic studies that indicate improvement of circulation. Some observers failed to point out that the natural course of many of these diseases is marked by remissions and exacerbations. Some measures that were accepted ardently by the medical profession a few years ago now are largely disappearing from the scene. It is emphasized that observations concerning the beneficial results of some particular methods of treatment in this condition which are not based on long periods of study are of little value.

Occlusion of the abdominal aorta, segmental occlusion of the iliac and femoral arteries, thromboangitis obliterans and arteriosclerosis obliterans make up the group of major diseases affecting the peripheral arteries. Thrombotic occlusion of the abdominal aorta and segmental atherosclerotic disease of the iliac and femoral arteries are now being successfully treated surgically in many cases. The general principles of medical treatment of peripheral arterial occlusive disease are: (1) arrest the progress of the disease, (2) dilate uninvolved arteries and arterioles, (3) increase circulation mechanically, (4) relieve pain, (5) instruct in prophylaxis against injury of ischemic tissue and (6) treat ulceration and gangrene. Medical and surgical methods of treatment should be supplementary and not competitive.

Procedures used to combat progression of arterial occlusive disease are: (1) cessation of the use of tobacco, (2) control of fungous infections, (3) control of lipemia, (4) control of diabetes, (5) control of polycythemia and (6) use of anticoagulants. Vasodilatation may be brought about in many cases with maintenance of a warm environmental temperature, both general and local, administration of a foreign protein intravenously, hypertonic solution of sodium chloride given by vein, ethyl alcohol given by mouth, anesthetization of sympathetic nerves or ganglia, regional sympathetic ganglionectomy, and the use of ganglion-blocking agents. An environmental temperature of 80 to 85 degrees F. produces some reflex vasodilatation but the use of heat cradles or boxes so that the temperature of the air is more than 92 degrees F. is detrimental. Lumbar sympathetic blocks with procaine hydrochloride or alcohol often produce effective temporary vasodilatation. Surgical sympathectomy produces permanent vasodilatation. Ganglion-blocking agents may be given in cases in which surgical sympathectomy may not be advisable.

In seeking medical aid most patients with occlusive arterial disease come to the physician for the relief of pain. Three types of pain may be present namely intermittent claudication, the pain of ischemic neuritis, and the pain of ulceration and gangrene. Various combinations of barbiturates, salicylates and opiates may be necessary in the management of ischemic neuritis but addiction must be guarded against. Surgical sympathectomy has relieved the pain of ischemic neuritis in some cases. Surgical section of peripheral nerves is no longer used by the neurosurgeons at the Mayo Clinic. Amputation for relief of pain, of course, is a procedure that all physicians seek to avoid. Ulceration and gangrene may be controlled in some cases by adequate prophylaxis, control of fungous infections of the feet, application of warm soaks with bland solutions, use of wet dressings with bland solutions, administration of antibiotics, application of powdered erythrocytes, debridement of gangrenous tissue, and amputation of the affected digits. The best of these is prevention. Fifty per cent of the ulceration and gangrene seen by the author is initiated by minor unavoidable injury, burns from hot-water bottle and electric pads, or other well intentioned but misguided local therapy to the feet and legs. All patients with ischemic extremities should be instructed in the care of their feet. A patient with gangrene or ulceration is best treated in the hospital without elevation nor dependency of the extremity. Wet dressings facilitate drainage and hasten sloughing but hot application should never be applied. Sympathomimetic compounds such as priscoline hydrochloride increase the arterial circulation in normal persons when administered orally but its value is doubtful in the treatment of occlusive arterial disease.

Surgical sympathectomy remains the method of

choice for increasing the circulation to the skin of the extremities. Only when the general condition of the patient imposes an undesirable surgical risk should surgical sympathectomy be discarded. Chemical sympathectomy is useful and justifiable when the risk of surgical sympathectomy appears too great. Early diagnosis is important in occlusive arterial disease. Aortograms and arteriograms may be necessary to uncover segmental disease of the aorta or major arteries. If the disease is diffuse in nature, institution of adequate active and prophylactic treatment may do much to prevent pain, disability, gangrene and economic loss. (Abstracted for the Middle Tennessee Heart Association, by Douglas H. Riddell, M.D., Nashville.)

BOOK REVIEW

The Rochester Regional Hospital Council. By Leonard S. Rosenfeld, M.D., and Henry B. Makover, M.D. Published for the Commonwealth Fund by Harvard University Press, 1956. Price $3.50.

This book is a report of the organization and operation of the Rochester Regional Hospital Council, and an evaluation of its accomplishments after some seven years of activity. The original development of the program was sponsored by the Commonwealth Fund which has been interested for many years in improving the quality of rural medical care. The Fund also sponsored the evaluation study which was undertaken by the Institute of Administrative Medicine of the Columbia University School of Public Health, under the direction of the authors of this volume.

The Rochester plan was designed to provide education for physicians and others engaged in medical services, to develop cooperative services by member hospitals, to improve hospital facilities, and to provide advisory services in hospital organization and administration. How well these objectives have been fulfilled is determined by the authors after six months of study using special study methods devised by them. Since this is the first such study, their development of methodology represents a pioneering effort. They encountered difficulty in measuring intangibles, as could be expected, but wherever yardsticks could be applied objective evaluations were made. The authors conclude that in most respects the conception and development of the plan have produced real accomplishments. They make some recommendations for improving performance, and offer suggestions for the expansion of existing facilities and programs.

The Rochester plan might well be studied by those communities with problems in providing adequate medical care in rural areas. That would include most of the United States.

L. D. Zeidberg, M.D.

Stress. (Fifth Annual Report). By Hans Selye, M.D., and Gunnar Henser, M.D., New York. M D Publications, Inc.

The authors continue their monumental annual contribution in the compilation of the references from the world wide literature of the contributions which deal with the glands of internal secretion. The book is invaluable for those who are interested in the physiology and diseases of the endocrine glands. Annually this volume also contains essays by outstanding authorities on certain topics. In this volume there are nine such articles, some of which are represented by such titles as "Primary Aldosteronism," "Hormonal Influences on Inflammation and Detoxification," "Adrenal Influences upon the Stomach and Gastric Response to Stress," "The Role of the Adrenal Cortex in the Etiology of Disease," "Cortisone in Relation to Lymphoid Tissue and Immunity," and so forth. The annual contribution in reviewing the literature in this field is a remarkable contribution.

R. H. K.

New and Nonofficial Remedies, 1956. Evaluated by the Council on Pharmacy and Chemistry (A.M.A.) 539 pages. Philadelphia: J. B. Lippincott Company.

Annually your reviewer is glad to recommend most strongly that this book be on the desk or in the office of every physician. In it are described the acceptable remedies which have been added to the medical armamentarium during the past twelve months. The pharmacology, the use of the drug, and its dosages are all described fully in each instance.

R. H. K.

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Journal of the Tennessee State Medical Association

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Among the advances in recent years is the recognition of depression or absence of fibrinogen as a cause of bleeding late in pregnancy and its management by the use of commercial fibrinogen. The author outlines the causes, diagnosis and treatment.

PROBLEMS IN BLOOD CLOTTING IN OBSTETRICS*

JOHN W. ADAMS, JR., M.D., Chattanooga, Tenn.

Hemorrhage during childbirth is usually attributed to uterine atony, premature separation of the placenta, vaginal or cervical lacerations or, more rarely, to incomplete delivery of the placenta. Bleeding from these causes is not ordinarily lethal.[1] During recent years it has been observed that fatal hemorrhage is frequently associated with a marked disturbance in the blood clotting mechanism, in which there is a marked depletion of the fibrinogen concentration and prothrombin activity, and the presence of a circulating fibrinolysin. Blood clotting time and bleeding time determinations may not show any significant alterations. Such changes are observed in severe abruptio placenta, prolonged retention of a dead fetus in an Rh iso-sensitized mother, toxemia of pregnancy and amniotic fluid embolism, as well as severe transfusion reactions, severe burns, and crush injuries.

Blood fibrinogen levels normally are about 250 mg. per 100 cc. An unstable clot may form when the fibrinogen levels are in the range of the minimal values for hemostasis (100 to 150 mg. per 100 cc.) or in the presence of a fibrinolysin, or as a combined effect of both of these factors.[2] Clinically, the presence of afibrinogenemia may be suspected by the appearance of petechiae or ecchymotic splotches, and it may be substantiated by two simple procedures, the "clot observation test" of Weiner[2] and the fibrin titer assay of Schneider.[3] In the "clot observation test" venous blood is drawn from the antecubital vein, placed in a clean test tube, incubated at 37 C., and the clot observed at frequent intervals. Failure of freshly drawn venous blood to clot or to form a normal sized stable clot is believed sufficient evidence to conclude that the circulating blood fibrinogen has become reduced to a critical level incompatible with effective hemostasis. Hemostasis is considered inadequate if the clot, when incubated at 37 C. dissolves within an hour. An unstable clot, regardless of cause, signifies that clinically there is ineffective hemostasis. Such findings demand immediate replacement of fibrinogen to restore the ability of the blood to clot, a situation which cannot be corrected by multiple transfusions alone. The amount of fibrinogen administered will depend upon the clotting behavior of the blood in subsequent venous samples as seen in the "clot observation test."

The Schneider fibrin titer assay is a simple coagulation dilution of whole blood. The highest dilution in which visible coagulation of fibrin occurs is the fibrin titer. A series of eight glass test tubes are set up in the following manner: the first tube remains empty, second tube 3 ml. Ringer's Solution, third tube 4 ml. Ringer's Solution and 1 ml. in each of the remaining five tubes. Venous blood is then drawn from the patient and 1 ml. is placed in the first tube. Then 0.5 ml. of blood is mixed with the diluent in the second tube and 1 ml. of this mixture is carried over to the third tube. The remaining dilutions are made by carrying over 1 ml. aliquots. The resultant dilutions of plasma component are: 1, 10, 50, 100, 200, 400, 800, 1600. A vial of topical thrombin is then dissolved to give 100 units per milliliter. To each tube 0.1 ml.

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of thrombin solution is added and each tube is tilted back and forth to insure mixing. Coagulation occurs within a minute. A control rack is prepared from the blood of another person. A fibrin titer above 400 is usually associated with normal fibrinogen levels obtained by more conventional chemical methods.

In 1901, De Lee first noted a hemophilia-like condition in the blood of a patient who died of uteroplacental apoplexy.[4] Wilson, in 1922, discussed the possibility of an interference with normal blood coagulation in patients with premature separation of the placenta and suggested that a circulating toxin might be involved. Many reports of cases of afibrinogenemia associated with abruptio placenta have appeared more recently.[2, 5-15] In these cases a thromboplastic substance derived from the uterine contents is forced into the peripheral circulation. Fibrin formation from fibrinogen is initiated with resulting fibrin emboli, afibrinogenemia and consequently a failure of the clotting mechanism. The patient literally clots herself to death.

A deliberate plan of obstetrical action must be taken in the case of patients with premature separation of the placenta. The treatment is concerned with the detection of those patients with incoagulable blood. Failure of the blood to clot initially, or fragmentation of this clot, or dissolution of the clot in the "clot observation test" within an hour after the blood is drawn indicates ineffective hemostasis due to afibrinogenemia. In the face of such findings, fibrinogen therapy is mandatory to restore the clotting mechanism. It is the only method short of complete replacement of the entire circulating blood volume, to produce normal coagulation and hemostasis in these desperate cases. Each pint of blood with a normal fibrinogen level of 250 mg. per 100 cc. is quickly diluted in the patient's circulation so that the effective fibrinogen increase would be about 10 mg. per 100 cc. In addition, patients with afibrinogenemia associated with severe premature separation may further lower the blood fibrinogen level during labor. Therefore, it may be necessary to administer fibrinogen repeatedly to patients with afibrinogenemia after delivery and the first few hours of the puerperium. Otherwise, it will be impossible to maintain an effective blood volume with multiple transfusions alone.

Artificial rupture of the membranes is an important part of the treatment directed toward promoting labor, and preventing further fibrinogen depletion and the appearance of a circulating fibrinolysin. After the initial shock has been eliminated, and the clotting mechanism restored to normal, abdominal hysterectomy is to be considered in the absence of effective labor. Cesarean section under these favorable circumstances seems preferable to an unpredictable and possibly exhausting labor in a patient recently recovered from shock.[2]

Following intra-uterine fetal death, development of a severe afibrinogenemia with resultant hemorrhagic diathesis may further complicate the pregnancy.[14-17] While blood incompatibility between the mother and the fetus may account for the majority of the fetal deaths, it is not considered the cause of the afibrinogenemia. The Rh factor is not involved in all cases. It is the present belief that afibrinogenemia is the result of increased utilization or destruction rather than a diminution in production. Fibrinogen depletion is believed to be the result of intravascular coagulation caused by the escape of a coagulant, possibly thromboplastin, from the uterus into the maternal circulation. The defibrinating material is supposedly derived from autolysis of the decidua or placental tissue. The important thing to remember is that fibrinogen levels must be restored sufficiently to cause stable clot formation at the time of onset of spontaneous labor or before embarking on any operative procedure. During the time of labor or any operative procedure, the circulating blood volume should be maintained by transfusions. If fibrinogen levels are maintained, intrapartum and postpartum hemorrhage are not anticipated. Moreover, afibrinogenemia will not recur following delivery.

Among the rarer causes of maternal death, embolism by amniotic fluid has been observed.[15, 18, 19] In most patients with this disorder who survive the period of delivery itself, severe hemorrhagic disorders have been noted before death. Severe uterine hemorrhage has been the rule and, in a few

cases, a generalized bleeding tendency has been observed. Intravascular clotting and the resulting afibrinogenemia is presumed to be the lethal factor in this syndrome. It has been shown that amniotic fluid contains a thromboplastic substance which initiates the clotting mechanism intravascularly, leading to a defibrination of the maternal blood. Thus, the maternal blood is unable to clot in a normal manner. If death can be avoided in any of these cases, it seems logical that this could be accomplished by the immediate administration of large amounts of fibrinogen.

Abnormalities in the clotting mechanism have been found in association with eclampsia, bilateral renal necrosis, and pituitary necrosis.[13, 15, 20, 21] While these conditions present clinical and pathologic differences, some of the pathologic findings in these cases suggest a common etiologic background. The frequent occurrence of cerebral hemorrhage in severe toxemia of pregnancy may indicate the presence of a hemostatic defect. The deposition of fibrin in various organs has been demonstrated at autopsy in many patients dying of various complications of pregnancy. It is likely that the process of intravascular clotting is initiated by the passage into the blood stream of thromboplastic materials, very probably of placental origin. Another possible mechanism is that of a generalized Schwartzman reaction. It has been suggested that the combination of intravascular clotting and fibrinolysis is responsible for the necrosis and hemorrhage seen in eclampsia, bilateral renal necrosis, and pituitary necrosis associated with pregnancy. These cases are often accompanied by severe shock, hemorrhage and anuria. Afibrinogenemia and fibrinolysis develop in this group of patients. A specific manner of treatment for these conditions remains in dispute.

Summary

1. Defective clotting of the blood in abruptio placenta, following intra-uterine fetal death, amniotic fluid embolism and eclampsia may be associated with afibrinogenemia and fibrinolysis of the clot.

2. Severe afibrinogenemia and fibrinolysis of the clot may be readily detected by the "clot observation test" of Weiner and the Schneider fibrin titer assay method.

3. The prompt recognition of these complications of pregnancy and the administration of fibrinogen may at times be life saving.

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Discussion

DR. HARRY E. JONES (Chattanooga): Dr. Adams has managed in his paper to achieve the very difficult balance of being both concise and comprehensive. His is an excellent summary of the important syndrome of afibrinogenemia.

The sequence of events from the concept of afibrinogenemia to the development of commercially available fibrinogen is another of the great stories of modern medicine. Almost every obstetrician can recall cases in the past where at cesarean section for abruption of the placenta, continued oozing of blood gave him many an anxious moment and perhaps necessitated the removal of the uterus or adnexa to stop the bleeding. How comforting now to have the answer at hand in the form of a neatly packaged bottle of fibrinogen for immediate intravenous use!

Every obstetrical patient who manifests abnormal bleeding in late pregnancy, at delivery, or in the early puerperium should have the advantage of one of the simple tests for hypofibrinogenemia enumerated by Dr. Adams, in conjunction of course, with the usual procedures employed to investigate the causes of bleeding at these times. Every hospital that accepts obstetrical patients should have on hand at least a small supply of fibrinogen, with access to more at all hours if needed.

The current price of commercially available fibrinogen is about $25.00 per 1 gram vial, and although several may be necessary to restore normal clotting ability of blood, this is still a small price to pay for such a life-saving substance. As with any of the pooled blood derivatives the possibility of homologous serum jaundice is present following the use of fibrinogen. This, too, is of small consequence when measured with the necessity of stopping otherwise uncontrollable hemorrhage.

Many lives have been saved in the past few years through the recognition and proper treatment of afibrinogenemia, and undoubtedly countless more will be spared in the future. Dr. Adams' paper should aid us in remaining alert to these problems of blood clotting in obstetrics.

Any thinking physician must question the extensive use of the tranquilizing drugs for almost any complaint a patient may present. The doctor should stop and consider what the indications may be for the use of this group of drugs.

THE USE AND ABUSE OF THE TRANQUILIZING DRUGS*

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The modes of action of the four tranquilizing drugs to be discussed, in so far as these are known to date, are important for the physician to bear in mind in his selection of the drug of choice. He must make his choice by using as his yardstick the severity of the illness to be treated, the toxic risk, and the generalized versus the specific effect to be gained.

Azacyclonol hydrochloride (Frenquel) and meprobamate (Miltown-Equinil) represent the two less powerful and less toxic drugs. Their effect is rather defined and selective. Azacyclonol exerts a blocking action either between the basal ganglia and cortex or in the cortex itself. Meprobamate blocks the internuncial circuits in the central nervous system, thus affecting voluntary muscle centrally, and in the brain appears to act in the region of the thalamus and caudate nucleus. Neither affects the autonomic nervous system.

Chlorpromazine (Thorazine) and reserpine (Serpasil) are the more powerful and more toxic drugs. Animal studies indicate that the presence of cortex is necessary to obtain a reserpine effect. It is hypothesized that in the brain that responds to reserpine there has been a loss of cortical inhibition which then permits sympathetic overactivity to exert its effect on the hypothalamus. The characteristic reserpine phenomenon being of a parasympathetic nature, it is presumed by Schneider and associates[1] that due to the enhancement of synaptic transmission of inhibitory impulses from the cortex by reserpine, the sympathetic hyperactivity is depressed.

Chlorpromazine is believed to have a direct inhibitory effect on the chemoreceptor trigger zone, the hypothalamus, and the reticular substance. These centers are believed to control vomiting, heat regulation, wakefulness, vasomotor and muscle tone, and secretion of the anterior lobe of the pituitary. Both drugs, therefore, affect those processes integrated with the central and autonomic nervous system; chlorpromazine affects the endocrine system as well.

Azacyclonol Hydrochloride is specific for treatment of the symptoms of hallucinations, delusions, and confusion in the schizophrenic. Studies indicate that it has its most marked effect on the patient having acute schizophrenia whose illness has had a duration of less than five months. It has been postulated that the longer the schizophrenic, whose sense of time, depth, sound and logic has become tangled and confused, perceives the world in this distorted way the more difficult it is for him to see the world in any other way. Fabing[2] states, "the schizophrenic must unlearn the schizophrenic's way of looking at the world about him." Frenquel serves its purpose by helping to prevent distortions of perception and integration, but its use must be early, before these distortions become the patient's real world, and the world of reality merely an incomprehensible dream. Clinically, by decreasing the hallucinations and delusions, it decreases the hostility, the agitation, and the acting out shown by many patients as a response to their bizarre experiences. The drug is compatible with both reserpine and chlorpromazine and its adjunctive use in early cases of acute schizophrenia seems indicated. Dosage is normally 20 mg. three times daily. If amounts greater than this are used, frequent blood pressure readings and blood cell counts are recommended.

Meprobamate is related to mephenesen but has a duration of action about eight times longer than mephenesen. In paralyzing doses it produces a reversible flaccid paralysis of skeletal muscle. Smaller doses produce muscular relaxation and sedation.

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It is an antagonist to the convulsant and lethal effects of pentylenetetrazole and strychnine. It is lacking in toxicity and in side effects except for some slight drowsiness for the first few days of medication and a rare sensitivity reaction of hyperthermia or skin reaction which can be handled by antihistamines or discontinuance of the drug. It is particularly useful as a medication before electric shock, allaying the patient's anxiety and decreasing the snapping motion of the seizure. thus adding a safety factor relative to the incidence of fractures, and decreasing confusion and agitation after shock. It is a drug of choice in the so-called "tension states" where psychogenically induced muscle spasm is often accompanied by pain or discomfort. Torticollis, psychogenic rheumatism, low back pain, tension headache, and at times premenstrual tension are all indications for a trial.

Its use as a sedative is often effective. It is only one-fifth as toxic as most of the barbiturates and has none of their side reactions. It prolongs barbiturate anesthesia.

It also has the quality of allaying fear and anxiety and seems particularly indicated in the anxiety reaction-anxiety neurosis group for, despite its lack of autonomic action, it often relieves palpitation, sense of breathlessness, and generalized symptoms of free floating anxiety that characterize this group. One may postulate that the more specific the situation to which the patient is reacting with anxiety, the greater the likelihood of symptomatic success with the drug.

Its effectiveness in those conditions in which the anxiety is displaced and fixed rather than free floating, such as anxiety and conversion hysteria, and obsessive compulsive neurosis, is not as marked as in the anxiety reactions, although some observers report scattered successes even in these groups. It should be mentioned that none of the tranquilizers show more than moderate success with these particular illnesses. Perhaps this is good, for the treatment of choice in these is intensive rather than supportive psychotherapy, and to effect such psychotherapy successfully one must often utilize the patient's anxiety as the prod which keeps him working to uncover the cause of his illness. One does not wish him to become tranquil and to accept his symptoms to the point that he is content to live with them, for these patients have a way of life that needs the help, not just a group of symptoms that need quieting.

The drug has also found usefulness in the alcoholic, in the relief of tremors, and following complete detoxification of the patient, to allay the anxiety and tension which may lead to another alcoholic bout. As an adjunct during the subacute phase it may be useful. At this time the most that one can say for its use in alcoholism is that it may safely be used empirically, but there should not be too great optimism regarding its success. It is compatible with both insulin and Antabuse and may promote a more easy withdrawal of alcohol from the chronic alcoholic.

The drug can also provide a useful prophylactic in times of crisis or great excitement such as in combat reactions, civilian emergencies, and atomic disaster. Despite the lack of reports on the following usages, I should like to suggest its experimental use in such specific conditions as premature ejaculation, frigidity, and stuttering. Although their causes are usually deep seated, because of their expression through some components of the voluntary musculature there may be some rationale for their experimental use.

The dosage is 400 mg. four times a day; as a night-time sedative, 800 mg. an hour before retiring. As a specific for a particular temporary situation 400 mg. one hour before the situation.

Although reserpine and chlorpromazine can best be discussed together, there are some specific actions of chlorpromazine which should be mentioned first. Its profound anti-emetic action makes it the drug of choice in instances of nausea and vomiting, and it should be used both prophylactically and therapeutically. It controls nausea and vomiting due to such conditions as gastroenteritis, uremia, cancer, Meniere's syndrome, protracted migraine, irradiation (for this it can be used prophylactically), drug reactions, hyperemesis gravidarum, and severe nausea and vomiting of pregnancy. In the morning sickness of pregnancy, unless severe, it should probably not

be used because of risks of toxicity. Before prescribing, particular importance must be placed on the diagnosis of what is causing the nausea and vomiting, for the effect may mask signs of such conditions as an acute surgical abdomen, brain tumor, or drug intoxication.

Chlorpromazine has a potentiating effect on anesthetics, narcotics, and sedatives, and when used as an adjunct to these their dosage should be one-quarter or at the most one-half of the usual dose. This action alone makes this a valuable drug in surgery, obstetrics, and pediatrics. The ability to quiet the patient's anxiety and fear and at the same time decrease the amounts of those drugs which may depress respiration or prolong unconsciousness is invaluable. If used as a medication before operation to reduce or eliminate nausea, vomiting, retching, hiccups, and to promote muscular relaxation, both during and after operation, all of which it does quite effectively, it should be given as a single dose preoperatively, and only under careful observation be given during operation. Its hypotensive effect must be carefully watched, and if this becomes severe, replacement of fluids, tilting of the body toward the head and norepinephrine are the treatments of choice. Epinephrine should not be used, for chlorpromazine may reverse its action causing a further lowering of the blood pressure.

There are certain common points about reserpine and chlorpromazine. Dosage must be considered an individualized matter. Although dosages may be suggested, the patient's progress must be the criterion by which dosage adjustment is made. This paper shall not attempt to give a description of the variety of doses. In general, a rule of thumb for major illnesses is that when chlorpromazine is used it be given intensively and in large doses, and when reserpine is used it be given moderately and in small doses. It is not uncommon for physicians to be giving 25 to 50 mg. of chlorpromazine a day over a period of weeks when the condition calls for prompt energetic action in the range of 200 to 400 mg. per day. Kinross-Wright,[3] in his treatment of schizophrenics, gives an average therapeutic dose of 2000 mg. per day and during the course of treatment at times approaches the 4000 mg. per day mark. Although his dosages are far beyond the average given in most reports, it is important to note that his rate of toxicity does not appear noticeably higher than that of more moderate investigators. This should give reassurance to those physicians who may be giving ineffective doses because of fear of toxicity.

Both drugs may take long periods of time before their palliative effect appears. (The word palliative is used rather than curative because observations have been made for too short a time to be able to arrive at any conclusions in regard to cure.) Even the effect on minor symptoms may be delayed for three weeks or longer, and some patients do not show the first response until they have been on these medications for several months. If the selection of cases in which these drugs are tried and the dosage used are appropriate, neither the physician nor the patient should be disappointed and discontinue therapy if no response has been noted in a week.

Both drugs show "stages" to which the physician should be alert. In reserpine therapy Barsa[4] describes three stages, the sedative, the turbulent, and the integrative. During the turbulent stage the symptoms may become exaggerated. The physician, believing his patient becoming worse, may discontinue treatment. Barsa recommends increasing rather than decreasing the dosage during this period if the patient becomes excited, and maintaining the same dose if the patient becomes depressed. Because of the fact that psychomotor agitation, irritability, and hostility are often increased during this period, this may be an indication for the empirical use of meprobamate as an adjunct to reserpine for the length of this stage.

The stages described for chlorpromazine by Kinross-Wright in his work on schizophrenics are the following: the initiation stage. During this stage amounts of dosage are increased rather rapidly until stage two begins. Stage two is characterized by signs of improvement which are in addition to those attributable to sedation and improved appetite. These signs are increase in communicativeness, social responsiveness, and increased depth of affect. During this stage the highest dosage that has been reached

in stage I is maintained. When the rate of improvement begins to lag, the third stage begins, even though some signs of psychosis may still be present. During this stage dosage is decreased each day until a maintenance dosage (in his series 200-400 mg. per day) is reached. The patient is maintained on this dose from a few weeks to many months.

Both drugs, given in sufficient amounts, soothe and relax patients. Exceptions to the contrary do occur. Instinctual strivings and cravings may be increased in some patients, notably hunger and eroticism.

Both drugs may display the side effect of extrapyramidal involvement and in severe cases this may present the classical Parkinson syndrome. The meaning of this is not as yet clear. Some investigators see this as indicative of overdosage and a sign to decrease dosage, while others correlate the clinical effectiveness of the drug to the presence of extrapyramidal signs and strive to attain this effect. Until more is known about this phenomenon it would seem proper, so far as general use is concerned, to maintain caution and decrease dosage. The syndrome is reversible with the decrease or withdrawal of the drug. Most patients with this syndrome can be continued on either the same or only a slightly reduced dose with the administration of Cogentin, 1 mg., two or three times daily with subsidence of the extrapyramidal signs.

Both drugs can effect severe psychiatric disorders in much the same way as insulin and electric shock therapy, but are far less dangerous. Since the advent of these drugs, in many hospitals only a few patients are now receiving shock, and the number of patients needing seclusion or restraints has decreased dramatically.

How do these two drugs compare in their side reactions? Following intramuscular use chlopromazine is apt to cause considerable pain from infiltrates in some patients after a few injections. This may be difficult to manage with the usual procedures of massage and use of procaine. Reserpine seldom causes this reaction and when it does it is less painful. Chlorpromazine may cause a contact dermatitis, and pills should not be crushed. Nurses handling large quantities of this drug must be careful of this reaction. Because of this aspect chlorpromazine should never be given subcutaneously. Patients on chlorpromazine should avoid sunlight. Sensitivity reactions, however, can often be managed by antihistamines. Both drugs should be given intravenously only in exceptional instances and then slowly and with great caution.

The liver appears more susceptible to chlorpromazine than to reserpine as shown by the appearance of jaundice in an incidence of about 1 per cent of patients. The jaundice appears directly correlated to the amount of dosage. The jaundice mimics that of extrahepatic obstruction. Pathologic changes of the parenchyma have not been observed. If a patient on chlorpromazine suddenly develops fever and mild grippe-like symptoms, his serum should be tested for increased bilirubin and his urine for bile. The "Ictotest" is convenient, accurate, and reliable if the manufacturer's directions are followed explicitly. If the test is positive chlorpromazinc should be discontinued. Patients should be confined to bed and given high protein, high carbohydrate diets with vitamin supplements.

Reserpine causes a stuffy nose in a fair number of patients, and a small number of patients develop the gastrointestinal symptoms of diarrhea and vomiting. Chlorpromazine often causes an oversensitivity of the skin and conjunctiva to light, while reserpine rarely does. On the other hand dilatation of the conjunctival vessels is common during the first few days of use with reserpine. Both drugs show a slight tendency to cause orthostatic collapse. Chlorpromazine causes tachycardia, reserpine bradycardia. On either drug the patient should receive care and supervision when first arising from bed. Both drugs may cause some hypo- or hyperthermia and both may cause slight dyspnea. Rarely leukopenia and agranulocytosis have been reported. Patients on chlorpromazine should be told to report promptly the sudden appearance of sore throat or other infection. White blood cell and differentials counts should then be done, and if bone marrow depression is found, the drug should be dis-

continued and antibiotics, and at times A.C.T.H. should be given.

Because of the potentiation effect on many central nervous system depressants, if a patient is on a depressant it is best to stop this until chlorpromazine therapy is instituted, and then if indicated, resume the depressant with low doses. The exception to this is in epileptics. The anticonvulsive drugs, including phenobarbital should not be reduced when chlorpromazine is started.

When does one use which drug? When rapid sedation is required chlorpromazine is used. According to Bleuler and Stoll[5] if a patient on reserpine develops extrapyramidal signs a change to chlorpromazine is indicated. If a painful local reaction develops from the intra-muscular use of chlorpromazine reserpine should be employed. Although there is no evidence as of November, 1955, to indicate that preexisting liver disease makes the patient receiving chlorpromazine more susceptible to jaundice it had best not be used. If there is hypertension reserpine is the drug of choice. If euphoria is desired rapidly it is important to use chlorpromazine.

What are the indications for treatment? The drugs are particularly useful in the psychoses. In acute schizophrenic reactions, where a rapid tendency to cure is present, these drugs achieve as much as insulin or shock treatment. In chronic and severe schizophrenia these drugs have a calming effect and make the patient more social as readily as the older forms of treatment. In curable acute or subacute schizophrenia with a slow tendency to cure, Bleuler and Stoll feel that insulin shock produces more lasting and better results. Both drugs are indicated in manic-depressive psychosis, in organic and psychogenic states of excitation, and in Huntington's chorea. If patients are resistant to both drugs alone, it is worthwhile giving smaller amounts of both drugs together.

Both drugs appear highly effective in senile agitation and are the drugs of choice. Reserpine should be tried first if intramuscular use is necessary in order to keep down the possibility of local irritation.

Although neither drug has had a highly consistent success in true nonagitated depressions, (i.e., the patient who is negative, withdrawn, dull, listless, and apathetic), chlorpromazine at times not affecting the symptoms and reserpine appearing to make them worse. Work by Ferguson,[6] using the drug phenidylate (Ritalin) shows promise. Mixed depressions do better on a combination of phenidylate and reserpine than they do on either drug alone. Phenidylate alone also favorably affects some of the true depressions. When used with reserpine it negates the side reactions of drowsiness and stuffy nose. The usual dosage is 10 mg. of phenidylate three times daily combined with 0.25 mg. of reserpine, but can range up to 5 mg. reserpine and 40 mg. phenidylate three times daily.

The treatment of psychoneurotics with these two drugs is variable and does not show the consistency and clarity of aid that is given the psychotic. The side effects assume considerable importance for these patients and the occurrence rate of side effects is higher in these individuals than in psychotics, possibly because they are too alert to physical symptoms and too prone to misinterpret them. The physician may have to spend considerable time allaying the fear the symptoms of side effects create. If the drugs are tried on the psychoneurotic it may be worthwhile to use meprobamate simultaneously to handle the anxiety.

The treatment of alcoholics is still experimental. Certainly there appear to be good results in handling the psychomotor agitation, delerium tremens and gastric symptoms of acute alcoholism, and in allaying some of the tension of the chronic alcholic. Since animal work has shown that chlorpromazine may potentiate alcohol, and because alcoholics are particularly susceptible to cardiovascular collapse, chlorpromazine should be given to bed patients only. Those in a stuporous condition should be allowed to sleep off some of the alcohol before receiving the drug. Patients with an ulcer history should receive Thorazine after meals with an adjunctive antacid because of its tendency to increase gastric secretions.

Patients with physical pain such as from cancer, itching of the neurodermatides, psychogenic pain such as the withdrawal symptoms of the narcotic and barbiturate addict, and restlessness such as the tuberculous patient may all receive relief from these

drugs. Although still with pain a type of disinterest develops that enables the patient to bear his pain with less suffering. Some cases of status asthmaticus have shown dramatic results. In epilepsy, although not as effective as Tridione, chlorpromazine has shown some usefulness. It must be used cautiously, however, in patients who suffer from both grand mal and petit mal attacks for the drug may precipitate a grand mal attack.

Irritable and hypertonic infants, from birth to 18 months, with marked unhappiness, fretting, patterns of broken sleep and poor weight gain, have shown an excellent response to reserpine. At present the author has several children with brain damage on Thorazine. One child, age 8, has had uncontrolled psychomotor agitation and violence with X-ray evidence of marked brain damage. The child has been on this drug for nine weeks, at a dosage of 200 mg. per day. His behavior has quieted markedly, his school work has improved amazingly. The mother states that the whole house seems different, commenting, "It's the first time in two years that we have been able to sleep the whole night through."

In conclusion, the point should be made that in the emotional disorders, even though some such as schizophrenia may eventually show an involvement of the chemical or enzyme systems as causal, the disturbance in the patient's personal relationship with others must still be considered as the prime concern of the good physician. If he sees the tranquilizing drugs as time savers he is missing the point. These drugs can save him time that would normally be spent on treating misleading symptoms or on control of behavior. But the same amount of time, and possibly even more should be spent in coming to understand the patient's basic difficulties in his interpersonal relationships. The drugs can make the patient more accessible to receiving and utilizing what he actually needs. The physician who forgets this is being expedient rather than therapeutic.

We may say that the word tranquilizer is well chosen, for it calms the patient. It soothes the worried relative, making his acceptance of the patient more wholesome. And as the vast numbers of patients with emotional problems file daily through his office, it eases the physician who until now has often been made guilty and anxious by his own awareness of not knowing what else to try. If he uses the drug wisely, in order to come closer in understanding to his patient, tranquility may be *his* lot.

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Discussion

DR. GUY ZIMMERMAN, JR.: We have heard an excellent appraisal of the use of tranquilizers in certain psychiatric entities, and the potential hazards of their use.

Two additional factors may be elaborated. Recent experience has shown there is a definite hazard in the simultaneous use of tranquilizing agents and the various electroconvulsive modalities. This is particularly true for chlorpromazine and the reserpine derivatives. Instances of a shock-like syndrome, cardiac arrhythmias and respiratory arrest have been reported when these drugs have been used with electroconvulsive therapy.

A second point of more general nature is perhaps of more importance. A simple analogy may be helpful. In an earlier era in medicine, we had the advent of opiates and synthetic narcotics. They were a God-send to suffering humanity, but we refused to use them as a rational treatment of a disease. We continued to search for an understanding of pathologic mechanisms that lay beneath outward manifestations of pain. We treat the *disease and the patient* rather than the *symptom*. Just as pain is, in most instances, an outward signal of disturbed inner structure, so neurotic anxiety, is a signal of disturbed inner psychopathology. Thus, we must use tranquilizing drugs in a proper perspective and not as an end in themselves. They should be considered a useful ancillary agent to control suffering while we treat the psychopathologic process, the *disease and the patient*, rather than a *symptom of the patient*.

The author describes technics used in operations upon lesions of the temporal bone.

THE INDICATIONS FOR THE ENDAURAL INCISION IN SURGERY OF THE TEMPORAL BONE WITH SUGGESTIONS IN OPERATIVE PROCEDURES*

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It may be said that almost any operative procedure on the temporal bone can be satisfactorily approached through the endaural incision. I know of no surgeon who, having used the endaural approach to the temporal bone enough to become familiar with the technic, has reverted to the postauricular or other approaches. The incision which I use most of the time is that of Shambaugh. The incision is begun at 6 o'clock, sweeping posteriorly around the canal to 12 as the first incision; the second part of the incision, No. 2, runs upward from 12, anterior to the cartilage of the auricle superiorly for about one inch. The endaural incision extends to the bone. The periosteum is elevated from the entire mastoid, or area which is involved. The skin of the bony meatus is elevated or not, depending upon the location of the disease. (Fig. 1.)



Fig. 1. The endaural incision.

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I feel that practically all pathologic areas may be reached through either the postauricular or the endaural approach, but the endaural incision is less traumatising and is probably a more direct approach to the disease than the postauricular. Furthermore, the external auditory meatus is more satisfactory after the endaural approach than after the postauricular, with the usual plastic procedures on the meatus. Practically all suppurative disease of the temporal bone can be attacked by the endaural approach. (Fig. 2.)



Fig. 2. Endaural exposure of mastoid.

In any operation on the temporal bone or auricle, good illumination is basic. Usually for the best surgical work on the temporal bone or canal magnification is necessary. The motor driven burr for all bone work along with continuous irrigation and suction have improved the operative procedures in this area.

Exostosis and Osteoma of Canal. Exostoses of the canal as well as osteomas of the canal or mastoid are satisfactorily removed by the endaural approach. The skin should be carefully elevated and all possible skin of the canal retained. After the removal of the exostosis or osteoma, if there has been marked traumatism of the membraneous

canal or if there is insufficient skin to cover the defect, it may be necessary to apply a skin graft followed by packing which is usually left in the original position for about ten days. The application of Ung. Neo Deltacortef to the meatus has been very helpful to me, and a pad of cotton placed in the upper pole of the meatus for three or four weeks after the operation has also aided in forming a satisfactory meatus. The postoperative care is very important. (Fig. 3.)



FIG. 3. The exposure of exostosis of meatus through the endaural approach.

Stenosis of External Auditory Meatus. Stenoses of the external auditory meatus from any cause which are giving symptoms may be attacked by the endaural route. It may be necessary to remove the subcutaneous tissue and scar, as well as the underlying bone. The bone is easily removed with the burr. One should not hesitate to make quite a large bed for the skin graft. Suturing the skin graft to the edge of the skin of the canal may aid in the healing. The original packing is left in the wound for about ten days. (Fig. 4.)

Tumors of the External Auditory Meatus. Tumors of the skin of the meatus such as basal cell carcinoma and epitheliomas may be removed by this route, as well as, benign tumors, such as fibroma, angiomas, cysts, etc., of the external auditory canal. Skin grafting should be done if there is insufficient skin to cover the denuded area.

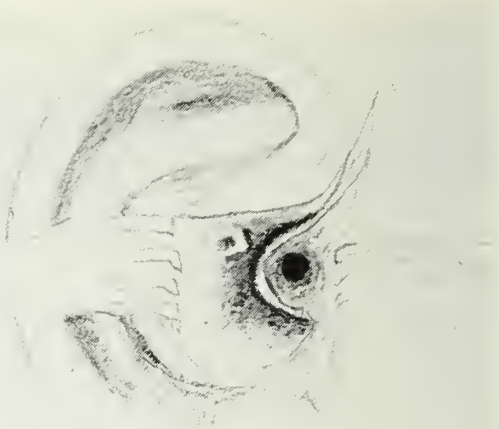


FIG. 4. Constriction of the external auditory meatus with endaural incision.

Goodhill has emphasized the external approach for the removal of congenital preauricular fistulas. Only the No. 2 incision of Lempert is necessary for this procedure. The fistulous tract can be visualized and resected through this incision.

Sympathectomy. Sympathectomy for relief of tinnitus is done by this route, turning superiorly the inferior portion of the membrani tympani bringing into view the promontory and hypotymanum so that the sympathetic plexus can be destroyed.

Tumors of Hypo-tympanum. Vascular tumors and granulomas of the hypotympanic region are visualized and may be removed by this route. Often only the No. 2 incision is necessary.

Facial Nerve Surgery. Decompression of the seventh nerve or grafting of this nerve for injuries in the temporal bone may be satisfactorily approached through the endaural incision.

Tympanoplasties and Plastic Procedures on the Membrana Tympani. Tympanoplastic procedures and also procedures on the membrana tympani are best carried out through the endaural route.

Zollner,[1] Von Wullstein,[2] Freckner,[3] Von Herth[4] and Goto[5] in their tympoplasties and plastic procedures on the membrana tympani used the endaural approach. Sliding

flaps of the skin of the canal were often used, especially in the closure of the perforations of the membrana tympani. It should be emphasized that any attempt to close perforations of the drum before suppuration is controlled would not be indicated. Closure of dry perforations may improve the hearing, especially if the windows of the middle are active and the ossicles and tympanium are free of disease. Excessive postinflammatory adhesions from previous inflammatory disease may be so extensive that good hearing would be impossible.

Mobilization of the Stapes. The usual mobilization of the stapes is done without an incision in the meatus, except near the membrana tympani, but in small meatuses this procedure may be safer, as well as easier, if the No. 2 incision of Lempert is utilized.

Suggestions for Temporal Bone Surgery. In doing mastoid surgery the removal of the incus is a major event and should not be done unless it is impossible to satisfactorily remove the disease of the attic or tympanum without the removal of this structure. Moderate necrosis of the incus is not sufficient reason for its removal. Before any operative procedure on the mastoid, a careful estimation of the hearing is most important. The amount of residual hearing may determine the type of operative procedure. Rarely a complete radical operation is indicated with fair hearing; usually, a modified radical operation will give a satisfactory result with a dry ear. If the incus is removed the head of the malleus should be removed.

Suppuration after a modified radical mastoid may be from an eustachean tube, but more often is due to inadequate removal of mastoid, attic, or petrous cells preventing a dry ear. Every effort should be made in the modified radical approach to remove diseased areas from the tympanum without doing a radical mastoid operation; in the occasional case, the space between the facial and chorda tympani nerves may be used, removing the bone laterally, externally from the aditus towards the chorda tympani, leaving the incus intact. (Fig. 5.) This bone can be removed with safety under magnification with the small cutting burr or with currettes. This approach permits removal of pathologic tissue from the tympanum. If the incus is necrotic and has to be removed, this area is much more adequate and, if the chorda tympani nerve is also sacrificed, this approach is large enough for almost any procedure. This posterior approach may be used for the removal of disease from the tympanum in some, avoiding a radical mastoid operation, thereby conserving hearing. If disease in the tympanum persists continuing discharge after a complete modified radical mastoid operation, further operation is indicated, usually meaning the radical mastoid operation. The radical mastoid operation should exenterate mucous membrane and disease from the tympanic cavity, including the epitympanum and cells about the semicircular canal, cells around the facial canal, the hypotympanum, including cells about the eustachean tube.



Fig. 5. The posterior approach to the tympanum through the space between the chorda tympani and facial nerves.

If a radical mastoid is done in a patient with fair hearing a thin split graft placed over the internal wall of the tympanum covering the round window and stapes like a tent may improve the hearing.

Summary

A short discussion of the indications for temporal bone surgery with some suggestions in technic in this field has been given.

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STAFF CONFERENCE

Vanderbilt University Hospital*

(1) Subdural Hematoma; (2) Meningioma

DR. EDWARD CHOBOT: *Case 1.* This is an eight day old baby born in a northern Alabama hospital at full term. The labor was 21 hours in duration. The child was noted to do well during the first and second day of its existence and actually nursed well at the breast. The second day the child was noted to be quite lethargic and unable to nurse properly. The right pupil was noted to be dilated and the fontanelle to be tense. At this time bilateral subdural taps were done and dark red blood was removed from the right. The pressure was relieved temporarily. Repeat taps done the morning of admission were negative although the fontanelle had again become tense. The baby was then transferred here. The child was slightly dehydrated, not markedly so. The anterior fontanelle was tense and the sutures of the skull were separated. The child would hold its head sharply to the right with the eyes constantly to the right. Also the right pupil was dilated and the right lid was closed. It was thought that the left arm and leg were somewhat weaker than the right. The impression upon admission was that of *acute subdural hematoma* on the right side. Laboratory work showed a hemoglobin of 10.4 Gm. white cell count of 9,000 and a normal urinalysis. The child was then taken immediately to surgery.

DR. CULLY COBB: The baby was operated on at about 3 days of age. A trephine opening was made and then enlarged to form a fairly good size subtemporal decompression on the right side, through which a large amount of solid clot was taken out. The cerebral cortex was depressed about 3 cm. and the solid hematoma extended over a considerable portion of the right cerebral hemisphere. The hematoma seemed to have dissected well down into the middle fossa under the temporal lobe and we felt that this was the reason why the third nerve paralysis was so prominent in this case. You can see that there still is dilatation of the right pupil and ptosis of the right eyelid. The pediatrician who had seen the baby soon after birth noted on the afternoon of the second day when the baby seemed to grow ill that the right pupil was becoming larger as the fontanelle grew tight and it was his impression that this was an acute hemorrhage. He did the subdural tap and found fluid but then at a subsequent tap was unable to get the fluid and he recognized that this must be at least in part a solid clot. The baby has done well since the operation and the only objective abnormal sign now is the third nerve paralysis which should be reversible. The fontanelle is now soft.

This is an unusual kind of infantile subdural hematoma, almost unique. We have treated this as an acute subdural hemorrhage. The acute subdural hematomas occur fairly frequently in grown-ups and the prognosis is generally poor with a mortality as high as 50 per cent. One reason for this is that when the subdural hemorrhage is under enough pressure to cause trouble during the earlier phase, the brain usually has been subjected to rather severe injury. The chronic subdural hemorrhage which is also a complication of birth injury is most common in infancy. Of course all hemorrhages begin acutely but usually the hemorrhage is venous and stops before there is any indication of a serious injury having occurred. Problems only develop later after a fibrous membrane has encapsulated the hematoma and the interior has become liquefied. The subdural tap for diagnosis is now well recognized and a common diagnostic procedure done when babies show any one or several of a rather peculiar set of symptoms and signs: enlargement of the head, failure to develop and gain, tight fontanelles, convulsive seizures, a low grade fever without explanation and general illness of the baby. The signs, in other words, are far from specific in the usual chronic subdural hematoma. Failure to gain mentally may be the only indication although usually there is some evidence of enlargement or tightening of the fontanelle. Occasionally, even, the chronic hematomas are mistaken for hydrocephalus, the head may become so large. Yellow or brown fluid is usually found just beneath the dura when a needle is introduced through the coronal suture just lateral to the anterior fontanelle. These cases usually are discovered from the first to sixth months with the highest incidence around the third month. A quite high incidence, though, is

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recognized as early as the first month after birth. Nearly all of the hematomas probably are the result of birth injuries. Where there is not some other accompanying birth injury, if the clot is recognized at a reasonably early time, the baby has an excellent prognosis for survival and further development. Dr· F. D. Ingraham has stressed the importance of the fibrous membrane that envelops the hematoma. This membrane proliferates from the dura and forms a rather thick covering on the outside and a thinner one on the inside. Even though the clot may be removed this fibrous sac over the brain may lead to atrophy of the underlying brain. For this reason if a substantial membrane is present it should be removed surgically. There are some cases in which taps alone will completely eradicate the hematoma but usually after the baby is in good condition, or after the sac has been evacuated, it is well to make a burr hole and examine the membranes or see if membranes are present and then if there are well formed membranes over the surface of the brain to remove these. This baby will present a special problem in that particular, because the clot was largely solid. We don't flatter ourselves that all of the solid clot, some of which extended down below the accessible area, has been removed. After he has recovered from his general illness, we can later do additional subdural taps. and if fluid is present, we can withdraw that and if necessary go ahead with another operative procedure to remove a hematoma membrane. I doubt that this will be necessary, however.

DR. CHOBOT: *Case 2.* Our next patient, Mrs. S., is remarkable for her lack of symptomatology. About a month ago she noticed some blurring of vision but thought little of this except to consult her ophthalmologist to get some glasses. She had no other problems of pain or any other abnormality except a slight buzzing in the left ear about one year ago and an uncomplicated automobile accident two years ago in which she lost a few of her front feeth. Her ophthalmologist found bilaterally fuzzy disc margins and referred her to Neurosurgery for diagnosis and treatment. Physical examination revealed a very pleasant, well-oriented, stable woman with no positive physical findings except bilaterally choked discs, somewhat worse on the left. Motor and sensory modalities were normal. Reflexes were bilaterally equal and normal. Babinski was negative. To summarize her findings then, we have a very well lady with only slight blurring of vision and bilateral papilledema.

Ventriculograms were done on the fifth hospital day and revealed a lesion in the right parietal region.

DR. WILLIAM MEACHAM: We thought this problem would be interesting because it presents a problem in clinical management and to some extent in psychological management. Here is a lady who is apparently well and who consulted her ophthalmologist because she thought her glasses needed changing. She had no headaches, convulsions, vertigo, paresthesias, weakness or paralysis. It comes as a real shock to people to have to be informed that they have signs suggesting pressure in the head and that they must see a brain surgeon. I am sure you all would share that feeling if it happened to you. When I saw Mrs. S., she had unmistakable papilledema, bilaterally, and to the best of our ability we were unable to detect any neurological signs suggesting localization of an intracranial lesion. When is papilledema papilledema and when is it optic neuritis? There is usually something to help you decide and I suppose that there are times when it is safe to say that papilledema is papilledema when the ventriculograms show some reason for it not to be optic neuritis. We had to confront Mrs. S. with the aesthetically unpleasant information that we thought she probably had a brain tumor, where we didn't know, what kind we didn't know, and that a ventricular air study would be necessary in order to be certain. A ventriculogram was performed which showed ventricular deformity and displacement indicating a massive lesion in the right posterior-parietal area. Then she had to be informed that the test showed the presence of a tumor and that we still had no way of knowing just what the prognosis would be. In such a situation, we are faced with the possibility of a rather formidable intracranial procedure, the results of which are questionable. One cannot make accurate predictions on the basis of the ventriculogram. It cannot tell you the precise nature of the lesion or its extent. It gives you only an indication of its presence and locality. Her tumor was a good sized tumor, about the size of a small orange. Tumors are always described in the surgical operative note as huge, because

they look that way. Yet after they sit in a fixative I am sure they shrink because now it doesn't look as large to me as when we took it out. The tumor was consistent enough so that by passing sutures through the tumor leaving the dura attached to the tumor we were able by gentle traction to deliver it from the depth of the brain and to roll it back on its attachment to the sagittal sinus. Then we took out part of the wall of the sagittal sinus and then repaired that with a running suture. So she still has a sagittal sinus, patent but smaller than usual. The sinus was not ligated to avoid the risk of possibly rendering her paraplegic. If by chance her meningioma, in future years, might recur locally it will probably occlude her sagittal sinus and this can be resected with safety. The possibility of recurrence in any tumor always exists. We feel that we have obtained a clean enough removal of this tumor so that the likelihood of local recurrence in Mrs. S. is reasonably remote. Histologically, the tumor is a typical psammomatous meningioma, perfectly benign, and I think one of the more favorable tumors that neurosurgeons see. The parasagittal is one of the favorable sites to have a meningioma. The fact that the patient has a meningioma does not always augur good since meningiomas of the tuberculum sellae or of the medial sphenoid ridge though benign tumors histologically speaking, may be inoperable from the surgical viewpoint.

DR. BERTRAM SPROFKIN: I know that Dr. Meacham did not expect me to remain silent about the papilledema versus optic neuritis problem. It is important to determine the nature of any related visual deficit. Optic neuritis is usually unilateral and associated with a central scotoma. The absence of any gross visual deficit in this patient and the bilaterality of the lesion are characteristic of papilledema.

Intercapillary Glomerulosclerosis: A Clinico-Pathologic Study. Mendelow, Harvey, and Brill, Gerald. J. Mt. Sinai Hosp. 23:663, 1956.

The authors reviewed 109 postmorten cases of diabetes mellitus occurring in 1,454 consecutive autopsies, an incidence of 13.3 per cent. The clinical and pathologic features were studied in an attempt to make a clinical-pathologic correlation. Thirty-five cases of intercapillary glomerulosclerosis (32 per cent) were encountered in the diabetic group. The presence of this lesion did not appear related to age or sex and was not proportional to the clinical severity of the diabetes. However, there was direct relationship to the duration of the diabetes, the incidence increasing with the length of the clinical course. Only 9 of the 35 cases (26 per cent) displayed the classical triad of hypertension, albuminuria and edema. Three patients who had the triad clinically were among the diabetics who did not demonstrate the specific renal lesions. Hypertension, and especially albuminuria in the younger diabetic, are much more diagnostic of the Kimmelstiel-Wilson lesion, when other specific renal disease can be ruled out. A morphologic study of the development of the diabetic renal lesions was undertaken, employing new methods of staining and microscopy. The Kimmelstiel-Wilson lesion is specific for diabetes mellitus. It is thought to occur as the result of metabolic changes in the basement membrane permitting transudation and accumulation of materials in the intercapillary spaces or mesangium with progressive glomerular damage and final obliteration. (Abstracted for the Tennessee Diabetes Association by Charles A. Rosenberg, M.D., Memphis.)

CLINICOPATHOLOGIC CONFERENCE

Baptist Memorial Hospital*

Wide-spread Tuberculosis

Clinical History: A 67 year old Italian man whose life's work had been gardening and landscaping entered St. Joseph Hospital in February, 1953, with a history of painless jaundice of 2 weeks duration. For 2 years he had noted ease of fatigue and frequent respiratory infections with a hacking, nonproductive cough. Two weeks earlier acholic stools and dark urine had preceded clinical jaundice. Anorexia was present but no unusual dyspepsia or weight loss was admitted. Pedal edema subsiding at night had been present for 4 weeks. Fever had not been present. Past history was otherwise nonrevealing.

Physical examination revealed a well nourished man not acutely ill. The positive findings included icteric sclerae, two plus pitting edema of the ankles and feet bilaterally and obvious pallor. There were no abdominal masses except the liver was felt two fingers breadth below the right costal margin smooth and nontender. Blood pressure was 140/78; temperature was 98.

Laboratory Studies: Admission red count was 2.3 million, Hgb. 5.5 Gm. %, WBC 3,500 with a differential of segs. 54, bands 2, lymphocytes 41, monos 3 per cent. Urinalysis was normal, Icteric index was 20, gastric analysis with histamine revealed free Hcl with a maximum of 50 units free acid. Bone marrow aspiration was interpreted as showing megaloblastic arrest compatible with a diagnosis of pernicious anemia. X-ray studies included a normal chest film and normal upper GI series. Cholecystogram showed good dye concentration in a normal gallbladder without stones. Barium enema revealed diverticulosis of the sigmoid colon.

The patient remained afebrile and improved with multiple blood transfusions and parenteral Vitamin B_{12}. During the second week the patient's reticulocyte count was maximal at 6%; he was discharged, at that time showing no jaundice.

During the next 2 years the patient was able to work while receiving parenteral liver extract, and oral folic acid, with periodic blood transfusions being necessary for his anemia and leukopenia. Additional history revealed exposure to insecticides as a gardener, including lead arsenate, chlorodane, and benzene hepachloride.

A *second hospital admission* was necessary in April, 1955, for anemia and jaundice. Admission RBC was 2.9 million, Hgb. 8.3 Gm. %, WBC 2,400, segs. 33, stabs 3, eosinophile 1, monos 4, lymphocytes 59 per cent. Color index was 1.0. Bone marrow aspiration showed relative and absolute decrease in myeloid elements and relative increase in nucleated red cells with signs of abnormal regeneration. Gastric analysis was normal. Reticulocyte count was 6%, total serum bilirubin 2.7 with 0.6 mg. % direct and 2.1 mg. % indirect. Cephalin flocculation was 1 plus. Stool was positive for urobilinogen. Urine urobilinogen was 11.6 units in 24 hours. Repeat GI and GB series were normal. The patient again remained afebrile with symptomatic improvement following blood transfusions and there followed spontaneous remission of jaundice prior to discharge.

In July, 1956, the patient entered St. Joseph Hospital a third time complaining of headache and fever. Studies revealed the patient to be anemic and jaundiced again with a serum bilirubin total of 2.65 mg. per cent. Urinalysis revealed a pyuria and cultures grew *B. pyocyaneus* sensitive to neomycin. Two blood cultures were negative. The patient's fever and pyuria subsided upon neomycin and he was discharged with an indwelling catheter.

The patient's *last hospital admission* was in the Baptist Memorial Hospital August 11, 1956, at which time his family gave a history of intermittent fever, headache, and increasing mental deterioration during the past eight weeks. Progressive weight loss and intermittent hiccoughs were likewise observed. Delirium at intervals had been replaced by semicoma over a period of the past several days.

Physical examination revealed a blood pressure of 134/74, pulse 100, respiration 18, temperature 100.6 rectally. The patient appeared debilitated and was semi-comatose responding only to painful stimuli, with periodic yawning movements. There was stiffness and general resistance to movement in all limbs and the neck. Fundi revealed no papilledema and grade 2 arteriosclerosis. Pupils were equal and reacted to light. The eyes were turned up and out and the sclerae were slightly yellow. The chest had a few rales in both bases. Heart was of normal size with regular rhythm and no murmurs. Abdomen was soft with no palpable masses. Rectal revealed a normal prostate. Neurological examination showed hyperactive deep reflexes bilaterally and equal positive Babinski bilaterally.

Laboratory Studies: Admission hemogram was RBC 3.6 million, hemoglobin 11.2 Gm., WBC 2,900 with differential segs. 53, eosinophiles 1, lymphocytes 42, monos 5, hematocrit 35%, MCV 98, MCH 30, MCHC 31, color index 1.05, reticulocyte count 0.4%, sed. rate normal. The erythrocytes showed occasional tear drop cells. Catheterized urine had a specific gravity of 1.014, protein 1 plus; sugar and acetone were negative; both RBC and WBC were numerous. Blood VDRL was nonreactive. Blood showed NPN 25 mg. %, creatinine 1.0 mg. %, total serum bilirubin of 2.9 mg. % with 2.4 mg. % indirect and 0.5 mg. % direct. Serum alkaline phosphatase 1.5 BU, total serum protein 6.0 Gm. % with albumin 4.3 and globulin 1.7 Gm. %. Cephalin flocculation

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was negative, BSP 11% retension at 45 minutes. Gastric analysis was normal. Sternal marrow aspiration revealed a cellular marrow exhibiting a maturation arrest in the granulocytic series at the myelocyte level, thrombocyte depression and erythrocytic hyperplasia. LE cell preparation was negative.

X-ray studies including skull plate showing a calcified pineal in normal position with no abnormal calcification or structural bone changes. A cholecystogram poorly visualized a large gallbladder with multiple radio-opaque stones. A portable chest film made August 21, 1956, was negative. A GI series was cancelled due to the patient's critical condition.

The patient's course in the first several days was that of irrationality and sphincter incontinence, fever 101-102 rectally and progressive weakness in spite of supportive therapy. At neurological consultation a lumbar puncture on September 15, 1956, revealed faintly cloudly fluid under 140 mm. water pressure, normal dynamics, cell count 27 lymph, 1 seg, total protein 188 mg. %, and VDRL nonreactive. At ventriculography subsequently there was good visualization of the ventricular system with generalized dilatation bespeaking a generalized cortical atrophy. The last week was characterized by persistent stiff neck, increasing fever, stupor, and generalized convulsive seizures only partially controlled by anticonvulsants. Urinary output continued good but increasing respirative difficulty was followed by expiration August 25, 1956.

DR. EARLE U. SCHARFF, JR.: In summary, this sixty-seven year old Italian gardener had a refractory anemia punctuated by episodes of jaundice, indirect bilirubinemia, and moderate reticulocytosis. He also had leukopenia and, probably, thrombocytopenia. In spite of the fact that he had acholic stools upon admission, his laboratory studies and his clinical course suggest that primary hepatic or extrahepatic obstruction was not the primary cause of the jaundice.

Of interest was the fact that he had developed, by the time of the third gallbladder series, radiopaque gall stones after two previous examinations had not demonstrated any calculi. This is not the usual finding in hemolytic anemia, which may occur with radiopaque stones but usually produces radiolucent stones. From the protocol, I can find no clear-cut evidence of response to either vitamin B_{12} or folic acid. He was given both of these, but he also was given blood transfusions, and I do not think we can make the diagnosis of pernicious anemia. He had free hydrochloric acid, no glossitis, no evidence of subacute combined degeneration of the cord. He manifested none of the features of folic acid deficiency that are usually seen in sprue, celiac disease, and steatorrhea. Macrocytic anemia associated with liver disease usually follows the pattern of liver disease primarily, and, even on his last admission he had relatively normal liver function tests. So, I do not think we could consider him to have had one of these conditions. It is well known that exposure to such volatile insecticides as chlorodane, the benzene derivatives, and even lead arsenate, may produce either hemolytic or aplastic anemias. He probably did not have a true aplastic anemia as evidenced by the fact that he did have apparent crises with jaundice and reticulocytosis. The bone marrow was described a little bit differently in each of the examinations, which could have been due to his disease or to the fact that he had previous transfusions, and is certainly not against aplastic anemia or hemolytic anemia. Now, I believe this man had some form of hemolytic anemia. He could have had one of the congenital varieties. His being of Mediterranean ancestry makes one think of thalassemia, but we do not have any evidence to go on that he did have such a thing. Developing the first symptoms at 67 years probably can occur. I think there has been one report of congenital hemolytic anemia with spherocytic anemia with the patient first developing jaundice at the age of 57 years. However, if he did have one of these things, it would be most unusual because he did not have a lot of hemolysis and a lot of crises. It was more of an indolent affair. We do not have any evidence of increased osmotic fragility or a big spleen that we would like to have in some of these conditions. Certainly, sickle cell anemia appears unlikely. Anemias of varying intensity may be a prominent manifestation of the leukemias and lymphomas, as well as of a variety of other systemic disorders. Such causes have been ascribed to infiltration and replacement of the marrow by the malignant process, the failure of delivery of the red cells to the circulation, or metabolic derangement of hemoglobin synthesis, and even hemorrhage. However, the role of

hemolysis as an important cause has been recognized since about 1906. The term symptomatic hemolytic anemia was used to describe and designate those cases in which the relationship exists between the hemolytic anemia and some underlying process. In addition to leukemia and Hodgkin's disease, other conditions have been described recently, including lupus, polyarteritis, and just about everything from virus pneumonia to infectious mononucleosis and even virus hepatitis as an underlying cause for what is now classified as acquired anemia, or symptomatic hemolytic anemia. As against the symptomatic hemolytic anemia, you see in literature now the hemopathic hemolytic anemia in which the manifestations of hemolysis are not evident except through specialized studies such as the hemolytic index, which is very difficult to perform, and even more specialized things such as the red cell survival studies. But things like chronic nephritic conditions are associated with anemia, which probably is on the basis of a hemopathic hemolytic anemia, at least in part. In one series of hemolytic anemias I ran across, there was an average duration of twenty months before the underlying cause, such as acute or aleukemic leukemia, manifested itself. In other words, one can go a long time with just hemolytic anemia with the underlying cause not being recognized. We had a case out at Kennedy Hospital a few years ago that had had hemolytic anemia for a long time and finally had a splenectomy and later on was maintained in remission with cortical steroids and, yet, just before I left he was found to have Hodgkin's disease, probably all related. Now, whether the terminal event in this case was due to activation of the primary cause or secondary infection is hard to say. Hodgkin's disease with meningeal and intracerebral metastases has been described more frequently of late. And, of course, tuberculosis cannot be ruled out. He had a pyocyaneus urinary tract infection. Whether that actually was causing the headache and fever on his next to last admission is a moot question. But a pyocyaneus infection could possibly be a cause of the intracerebral lesion in the form of a hidden abcess. He was certainly studied for brain tumor with other space occupying lesions without positive findings. We did not have evidence of what the culture showed on the spinal fluid, so we are just left guessing. My final diagnosis is symptomatic hemolytic anemia due to malignant lymphoma with terminal cerebral metastases.

DR. THOMAS C. GLADDING: The autopsy revealed a severe tuberculous involvement of the right kidney which consisted of a thin shell of remaining renal parenchyma encasing a large amount of caseous, partially calcified material. The right renal pelvis and ureter were also tuberculous and the ureter was completely obstructed in the lower portion by fibrous tissue. This process was probably of many years' duration. Certainly, no urine was being produced by this kidney and no urine could have passed through the obstructed ureter.

The right adrenal gland was almost completely replaced by a caseonodular, active type of infectious process. In the apices of the lungs, there were small fibrocaseous foci around one of which there were some tubercles with giant cells. The meninges over the base of the brain, including the temporal lobes and the brain stem, were the site of a severe granulomatous inflammation with multiple large foci of necrosis. The meningeal inflammation is the type one associates with a fairly acute reaction, that is, it is of recent origin and contains extensive acute necrosis which has not become caseous. The reaction spreads into the adjacent brain tissue along vascular channels and there are numerous vessels in the meningeal inflammation with profound endothelial proliferation and many of them are almost completely or completely occluded. No doubt, this would cause marked vascular insufficiency to the affected structures, especially in the brain stem.

Actually, no causative organism could be demonstrated in any of the lesions in the kidney, adrenal, lungs, or brain. The type of reaction in the brain and adrenal was such that one would expect no difficulty in demonstrating the organism but repeated stains on all the involved tissues were negative. Therefore, the diagnosis of tuberculosis is not based on actual demonstration of the organism but is based upon percentage

of chance. If the lesions were due to a fungus, I would expect the fungus to be demonstrable with the special stains used. Normally, fungi do not produce this type of inflammation in the brain although occasionally they may. About the only other type of organism that has been demonstrated to produce lesions similar to fibrocaseous tuberculosis in the lungs is the Brucella group of bacteria. They are next to impossible to demonstrate in tissue sections. This possibility seems extremely remote. I believe that the disease has to be due to tuberculosis and the amount of caseation in the kidney and adrenal and necrosis in the meninges makes me believe that the patient was extremely hypersensitive to tuberculoprotein.

The anemia is more difficult to explain, but it would seem that at some time the patient developed a symptomatic hemolytic anemia due to an isoantibody or isohemolysin. Tuberculosis is often associated with a non-specific anemia, but in this case there were the periodic episodes of jaundice with indirect bilirubinemia and, on one occasion, a slightly elevated urobilinogen level in the urine (11.6 units). In addition, there was a severe hemosiderosis of the liver with a mild to moderate hemosiderosis of the spleen. These changes could have been due to multiple transfusions but when associated with the other findings seem to add weight to the diagnosis of a hemolytic anemia. There was no hemosiderin in the bone marrow or left kidney. The latter was hypertrophied to almost twice normal size and had taken over the function of the destroyed right kidney. The lack of hemosiderin in the bone marrow and kidney is against a hemolytic anemia, but such a finding need not necessarily be present. It should be noted that on the initial hospital admission, there were acholic stools and that on two occasions, a gall bladder series was negative although it showed stones on the last admission. The stones in the gall bladder were small, black, and facetted. There was some calcium in the stones. It may be that these stones had been present all along or they may have formed during the illness due to increased hemolysis of red cells with increased excretion of bilirubin. There were similar stones in the common bile duct and this duct was dilated moderately. The dilatation probably means that the stones in the duct had caused obstruction in the past. It may be that, at varying periods, a stone became lodged in the ampulla causing jaundice and then passed without too much difficulty since they were small stones. Against this is the history of painless jaundice, indirect bilirubinemia and, on one occasion, increased urobilinogen in the urine. Lastly, the patient developed severe depression in the peripheral red cells, granulocytes and thrombocytes. I would interpret this as evidence of so-called hypersplenism. The presence of the hemolytic anemia over a period of time may represent a form of hypersplenism which became obvious terminally. To add to this, there is the presence of a hypercellular bone marrow (vertebra and rib) with erythrocytic hyperplasia, granulocytic hyperplasia with maturation arrest at the myelocyte level and deficient thrombocyte formation although there were sufficient megakaryocytes in the marrow. This means, almost certainly, that some factor was probably acting upon all three elements of the bone marrow and this is most easily attributed to hypersplenism.

Examination of the tissues removed at autopsy failed to reveal any heavy metals by chemical methods.

Other findings are as listed in the final diagnoses.

Final Diagnoses:

Caseonodular tuberculous meningitis
Caseonodular tuberculosis of right adrenal gland
Caseous tuberculosis of right kidney and ureter with complete obstruction of the ureter
Hypertrophy of left kidney
Fibrocaseous tuberculosis of pulmonary apex, bilateral
Ghon tubercle, left lung
Acute bronchitis, bilateral
Bronchopneumonia, bilateral
Generalized cerebral atrophy with internal hydrocephalus
Cholecystolithiasis
Choledocholithiasis with dilatation of common bile duct
Intrahepatic choledocholithiasis, focal
Myocardial hypertrophy
Focal myocardial interstitial fibrosis with healed foci of myocytolysis
Generalized arteriosclerosis
Acute splenic tumor (hyperplasia)

Hypersplenism, possible
Hemolytic anemia, probable
Hypercellular bone marrow with erythrocytic hyperplasia, defective thrombocyte formation and maturation arrest in granulocytic cells
Hemosiderosis of spleen and liver
Prolapse of gastric mucosa through pyloric ring
Diverticulosis of sigmoid colon
Nontoxic nodular goiter
Benign prostatic hyperplasia, mild
Chronic cystitis
Dilatation of right seminal vesicle
Emaciation
Postoperative state, bilateral trephination

QUESTION: Were any cultures obtained at autopsy?

DR. GLADDING: I am sorry to say that no cultures were obtained.

QUESTION: Were you impressed that the amount of inflammation in the meninges was more than one usually sees in tuberculosis?

DR. GLADDING: I do not think it was any more than one may see in a well developed case of tuberculous meningitis. It was more acute than one usually sees, but if the patient were abnormally sensitive to tuberculoprotein, a factor which we do not know, it would not be surprising to see such a reaction.

QUESTION: Would the involvement of the meninges as seen produce the comatose state observed before death?

DR. GLADDING: I would certainly think so. The marked involvement of the leptomeningeal vessels with endothelial proliferation extending well into the substance of the brain, *per se*, would almost certainly result in a vascular insufficiency and since the inflammation was most marked about the brain stem, that is the base of the brain, the medulla and upper cervical cord, I would expect some rather vital structures to be affected. One cannot explain all the symptoms of a tuberculous meningitis merely on the local involvement seen histologically. The vascular insufficiency probably results in functional impairment of cells which cannot be seen through the microscope.

QUESTION: Would you not expect a higher cell count in the spinal fluid?

DR. GLADDING: Yes.

QUESTION: Would you not expect the spinal fluid pressure to be higher?

DR. GLADDING: Well, since the pressure was normal, I would have to say that I would expect the pressure to have been higher.

QUESTION: It is unusual for the cell count to be this low in tuberculous meningitis. I wonder if something might have happened so that the fluid was not examined immediately.

DR. GLADDING: I do not know the answer to that but, of course, it is a possibility.

DR. SCHARFF: The hematological abnormality in this case may have kept the cellular response down.

President's Letter



Dr. Wood

The Hon. Ralph Guinn, speaking in the House of Representatives on April 12, 1956, relative to Federal Aid to Education, stated that: "Local communities, if left alone, with their native American genius, intelligence, necessity and financial capacity, will find a way to solve their problems. They alone can meet their necessities. They alone know what they are."

We in Medicine know our problems and our needs. We know that the costs of Medical Education have soared and the demands upon the facilities and the services of our Medical Schools have increased rapidly over the last decade and promises to increase even more rapidly in the years ahead. We also know that because of inflation, that endowments created in past years are yielding decreasing incomes because of the increased taxes and price inflation. We know also that the rapid advance in science and technology have made a good medical education a much more expensive accomplishment than it was a decade ago.

By reference to the November Journal, you will learn that only 1% of the physicians in Tennessee contributed to the American Medical Education Foundation last year. We believe that this is a result of our failure to inform the profession and to remind them that the Medical Schools particularly those not supported by taxation must depend upon the profession rallying to their aid or that the school must be dependent upon Federal contributions. We are aware that physicians are necessary for the protection of the health of the people and we necessarily must deduce that neither the people nor the custodians of the Public Health will sanction the closing of a single Medical School because of lack of financial support. The Medical Profession must decide whether Medical Education shall stay in the hands of those now intrusted with Medical Education or whether they are willing to risk the chance of Federal Control. The present high standards of Health and Medical care in our country rests on foundations erected by the Medical Profession. If we expect to maintain these standards and to exercise complete control of the Medical Schools, we each must personally support them. May I suggest:

(1) Consult your State Journal for the Chairman of your district.

(2) Consult your tax advisor to obtain maximum results from your contribution.

(3) Let us help Joe Johnson and his Committee bring Tennessee from the bottom of the totem pole.

(4) Give until it hurts, and then you will feel better.

R P Blood M.D.

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DECEMBER, 1956

EDITORIAL

PHEOCHROMOCYTOMA

In 1929, Pincoffs[1] made the first clinical diagnosis of pheochromocytoma and Shipley successfully removed the tumor. Since that time[2] more than two hundred cases of this disorder have been reported. It has been estimated that about seven hundred patients die annually from this type of tumor. Therefore, a clinical awareness of the condition must be borne in mind.

The symptoms may suggest psychoneurosis, hyperthyroidism, diabetes, heart disease, brain tumor, allergy, or benign or malignant hypertension.

The tumor is derived from the chromaffin cells of the adrenal medulla. Almost 10 per cent are multiple, are associated with multiple neurofibromatosis in 5 per cent, and with metastases in about 7 per cent. It elaborates either epinephrine or norepinephrine, or both, in varied amounts. The resulting hypertension is more commonly sustained (70 per cent) than variable (30 per cent). When epinephrine is elaborated there results an elevation of the metabolic rate and an intermittent glycosuria, in association with the usual clinical manifestations of an injection of adrenalin.

Although the diagnosis may be suspected on the basis of symptoms or physical findings, it is established by pharmacologic means.

The two chief tests are the (Roth-Kvale) intravenous histamine test, and the Regitine test (Phentolsmine). The occurrence of false positive, and indeed false negative responses keeps the diagnostic tests from being text-book in simplicity. A more refined test is the demonstration of the breakdown products of epinephrine (catecholamines) in the urine.

After the presence of a tumor is suggested, it may be localized by intravenous pyelography. In most instances, however, its site is determined only by surgical exploration.

The treatment is surgical excision, with protection of the patient during the surgical procedure by an adrenolytic agent (Regitine). After removal of the tumor shock usually occurs and often a hypertensive agent, such as norepinephrine, must be infused for a few days. Failure to detect and remove the tumor will be followed by the development of a sustained hypertension which may disguise the true nature of the lesion. Death may follow the consequence of sustained long-standing hypertension.

The fact that only eighteen cases were reported by 1937[3] and two hundred and seven by 1951, suggests that we are developing a proper appreciation of this interesting condition.

A. W.

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[1]Pincoffs, M. C.: A Case of Paroxysmal Hypertension Associated with Suprarenal Tumor, Tr. A. Am. Physicians 44:295, 1929.

[2]Graham, J. B.: Pheochromocytoma and Hypertension; an Analysis of Two Hundred and Seven Cases, Internat. Abstr. Surg. 92:105, 1951.

[3]Howard, J. E., and Barker, W. H.: Paroxymal Hypertension and Other Clinical Manifestations Associated with Benign Chromaffin Cell Tumors (Pheochromocytoma), Bull. Johns Hopkins Hosp. 61:371, 1937.

LET US THINK BEFORE WE DECIDE

The Medicare program will be an accomplished fact by the time this appears in print. This represents a turning point in the socio-economic aspects of the practice of medicine. For the first time in American history organized medicine has put its signature on the line with the Federal government in an agreement on fees for the care of a category of our population. It was more or less forced upon us by our protests against drafting an excess of physicians into the armed forces and who then cared for dependents of military personnel whom we thought should fall into civilian practice. Thus, Medicare developed, logically to be sure, but fatal as regards the future; a precedent has been set, and a fee schedule decreed by mutual agreement (not that it is necessarily in its final form).

The next great category of the population, and of course much larger, which may wish to negotiate is that of the Federal employees, and there is no reason why State and County and, in fact, all civil service employees should not join them. The Federal employees are now working toward a health insurance program. (It is conceivable that if a program similar to Medicare were applied to veterans [except for the tuberculous and neuropsychiatric patients] good medical care could probably be provided at a saving of money.) The medical profession having once agreed upon fees for one or more federally supported groups, it can readily be seen that such a fee schedule will simply be applied in other third party contracts, insurance, labor-union medical care programs and the like.

This is looking into the coming years, forecasting what may well develop for much of our population. There is, however, a related and projected program which will occupy organized medicine within a matter of months. Notice of this new facet of governmental medicine was mentioned in the Executive Secretary's page in the November issue of the State Journal.

From the information available (A.M.A. newsletter), under Public Law 880 there is provision for "payments from jointly-supported U. S.-state funds, for the medical care of persons in four public assistance categories," (Old Age, Child Aid, Blind and Disabled). This program, for which a fee schedule will need to be set-up, is to get underway in about six months. It is estimated that the program may apply to some 5 million persons, or about 3 per cent of the total population. The estimate is made that the maximal possible annual expenditure of federal-state funds is $8,653,440 for Tennessee, (a possible $200,000,000 nationwide expenditure), to go to physicians, dentists, nursing homes, hospitals and druggists.

The question which comes to your Editor's mind, applicable to either Tennessee or on a national level, is whether we should take yet another step in contracting with the Federal government for the payment of fees, or should we maintain our freedom in the age-old concept of caring for the poor without fee!

In Tennessee, by the time hospitalization, nursing, dental and drug costs are subtracted from the maximal 8 million dollars, is the remaining income to the doctors for this afflicted 3 per cent of the population worth the price! The Tennessee State Medical Association, in its Hospitalization of the Indigent, proclaimed its willingness to care for the indigent in the hospital without fee. This is the basic principle raised by the editorial question.

No matter how bitterly some may be opposed to governmental medicine, they will want their share of this pie, rationalizing, "these are my tax dollars and I'll get some of them back." However, it may behoove the doctors to do some thinking along the following lines,—"How many dollars will I get from these 'poor,' how much time will they take, how many forms must I fill out, and how many of my collected dollars will I return to Uncle Sam in income tax?"

Might it not, in the long run, be better to shun another commitment with government, and to stand on the basic philosophy of freedom to do as one wishes, and to care for the indigent without fee,—the ministering side of our profession which sets it off from any other human endeavor except that of the minister! When we are ready to give up the last vestige of this philosophy and expect no more to give gratis of our knowledge and skill to the indigent, we surely have sold our *"birthright for a mess of pottage."*

Dare one hope that organized medicine

would answer the Federal government in the spirit of the Volunteer State—"go ahead with Public Law 880,—pay the costs of hospitalization, etc., we will accept no pay, but will give the best medical care we can to these unfortunate indigents."

One other practical aspect should appeal to every hospital's Committee on House Staff Training. Staff clinical material is being continuously reduced by third party contracts. The indigent in the public assistance categories should be admitted to the hospital, underwritten by the government if you please, as staff cases for the training of future generations of physicians and surgeons.

Organized medicine, however, probably will take what would *seem* to be a sensible path,—accept or agree upon some sort of fee schedule. But before relinquishing its basic prerogative of *true service* given without recompense, it should explore the philosophy of Tennessee's Hospitalization of the Indigent.

R. H. K.

★

Special Item

Educating Your Society to Good Public Service Practices*

John H. Burkhart, M.D., Knoxville, Tenn.

I am told that the difference between a talk and an address is that when one makes an address one receives an honorarium. Now in my *talk* this afternoon I have been asked to enlarge upon the subject, "Educating Your Society to Good Public Service Practices." Somewhere, somehow, Jesse Ford got the idea that I was, if not an authority on this matter, at least an experienced observer. While I must in all candor admit that the Knoxville Academy of Medicine, when critically evaluated, seems to measure up rather well in its Public Service attitude and activities, I must hasten to disclaim the bulk of the credit for this happy circumstance. Such PR pioneers as our present State Association President Dr. Bob Wood, Dr. Charlie Smeltzer, Dr. Ralph Monger, Dr. J. B. Naive, and Dr. Roy McDonald laid such a firm and level roadbed that my job became merely to keep the train on the tracks. However in attempting to give you something which might be helpful on the subject assigned to me, I shall try to be as faithful as the cow which a farmer had offered for sale. When questioned concerning her pedigree and ancestry he knew nothing of these matters; likewise he was ignorant of the butter fat content of her milk or even of how much milk she gave. All he could really say concerning this latter point was "She's an honest old cow and she'll give you all she's got." I can do no more.

It is safe to concede that it is as difficult to cram a public service program down the throat of a reluctant doctor as it is to force-feed a 6 year old. There would seem to be a great number who feel that such a program is not only poppycock and unnecessary, but that it is actually beneath the dignity of the physician to engage in the activities of such a program. I believe, however, that the clamor of this group gives a false impression as to its number, and it might be appropriate in this regard to use a phrase which aptly expresses a similar opinion concerning the incidence of frigidity, to wit "Many are cold but few are frozen."

Public Service has been very cleverly and succinctly defined as doing good and getting credit for it. As this pertains to a county, state, or national medical society, this definition is insufficient. The Public Service that organized medicine can and must render on a local, state, or national scale extends beyond merely doing good. It extends actually into the realm of the principles of the Sermon on the Mount. Furthermore, the rendering by a medical society of public service is not a practice "above and beyond the call of duty" or even an adjunct or appendix to the practice of medicine. The rendering of public service is a basic responsibility, obligation, and duty of the individual practitioner and the medical society on any level, and this philosophy is fundamental. If even a few individual members of a medical society have accepted this philosophy, the society is indeed fortunate. But we are assuming to-

*Read at the County Medical Society Officers' Conference, September 23, 1956, Nashville, Tenn.

day that this is not the case, and my purpose is to describe how I think such a philosophy can be developed in an individual medical society.

You will notice that I have used the term *Public Service* rather than *public relations.* I much prefer the former. They are not necessarily synonymous, but one I think supersedes, transcends and includes the other. A good Public Service program on the part of a medical society just naturally results in good public relations, and conversely satisfactory public relations is not likely, perhaps not even possible, without an adequate Public Service program. Let us see what the essentials are in developing such a program.

It might appear that the first essential is to convince the individual physician and thus the medical society that there is a need for such a program or that such a program is desirable. This of course is the overall objective, but I think there are three fundamental preliminaries to the attaining of this goal. This is not necessarily a one-two-three recipe and it may be advantageous to carry on all three simultaneously, or at least concurrently. Therefore, I shall amplify these three points, but the order in which I take them up is not significant.

The *first point* is this: There must be a definite program in mind. It is not enough to say in effect, "Boys, we've got to do something for the general public," and leave it at that. Neither is it sufficient to sit back and wait until a challenge or a project or a need presents itself. A good Public Service program must be an offensive program and must anticipate rather than just meet the demand half way. It is desirable, therefore, that the situation in the locale of the society be examined and evaluated and that a program be proposed on the basis of this evaluation. A great deal of assistance along this line can and should be obtained from the Department of Public Relations of the American Medical Association (which parenthetically I hope will some day soon add stature and dignity to itself by changing its name to the Department of Public Service). Here again, however, the need for local evaluation is apparent. It is obvious that the Chicago office cannot advise adequately on the requirements of a good Public Service program in Knoxville, Nashville, Dyersburg or Kingsport. There are problems and needs and deficiencies more or less common in all areas, but there are likewise many unique and peculiar to an individual locality and this must be recognized and taken into consideration. Such Public Service activities as establishing a speakers' bureau, achieving good press relationships, presenting radio and television programs in the interest of lay education and information, establishing an emergency call system, assuring doctor-lawyer cooperation, and assisting in rural health projects, are among those Public Service activities which can be fitted into nearly every medical society's program. More individualized, however, are such activities as working with medical schools, carrying out anniversary celebrations, presenting lay awards for distinguished service or achievement related to medicine or health, a poison control program, developing a program of recruitment of student nurses and/or medical students, cashing in on the public relations potential of medical detail men, and sponsoring or cosponsoring science fairs. There are many other projects and activities which could be added to either of these lists, but these will possibly suffice. At any rate my point is that there is no scarcity of ingredients for a good Public Service program and therefore the outlining of a proposed program is not difficult. The problem is not in finding things to do; the problem is in not becoming over-extended and becoming too ambitious at the onset.

The *second point* I should like to make is that the local needs and the program proposed to meet these needs must be carefully explained to the medical society as a group. This can, of course, be done on an individual basis, but I think it is essential that the group as a whole be acquainted with the proposed program and the reason for such a program. It is only in this way that cooperation from the individuals who make up the society can be obtained. It is doubtless already an established fact for most of you, if not for all of you, that there

From the Executive Secretary

ORGANIZATIONAL NEWS

Dependents Medical Care Contract Negotiations

● On November 5th, the negotiating committee of the Tennessee State Medical Association was called to Washington to formally determine the Dependents Medical Care Contract with the Department of Defense. The negotiators faced a number of changes in the contract and were asked to complete the fee schedule on additional procedures when they sat down with the Government representatives. Some 300 medical, surgical, radiological and pathological procedures had been completed and presented to the House of Delegates. At the negotiation session, the negotiators were asked to complete the fee schedule of between 1600 and 1700 procedures. The entire fee schedule was completed in keeping with the authorization granted by the House of Delegates. This was done by carrying out the unit values and the conversion factors based on the fees as approved by the House of Delegates in its special meeting on September 22nd.

Changes in Contract Form

● The contract was changed in many respects. Since the negotiations on the fee schedule took an entire day, the negotiating committee of TSMA had little opportunity to study the contract and so notified the Department of Defense, requesting that the completed contract be forwarded to the Tennessee State Medical Association headquarters in order that it could be further studied by the TSMA attorney and the negotiators. Upon receiving the contract from Washington, additional discussions were held with members of the Board of Trustees and the Prepaid Insurance Committee. By the time that this issue of the Journal goes to press, it is contemplated that the contract will be signed and returned to the Department of Defense in order that Tennessee will be ready to participate in Public Law 569 by the effective date, December 8, 1956.

All Members of TSMA To Receive Fee Schedule and Doctors Manual

● As rapidly as printing and distribution can be made, an explanation of the Dependents Medical Care Act, together with a copy of the full schedule of fees will be mailed to every doctor member of the Tennessee State Medical Association. It is hoped that this will be ready and will reach members of the profession by December 8th. This will be important material that should be retained by every physician.

Contract for Seven Month Period

● The contract will be signed and effective for seven months only. It will be subject to re-negotiation at the end of June 30, 1957. A number of changes in the fee schedule were requested by the Department of Defense, but since the negotiators of TSMA had no authority to make such changes, the schedule was accepted for the period from December 7 until the end of June 1957. At that time, the contract may be re-negotiated and will be effective for one year.

Medicare Negotiations Difficult

● Representatives from TSMA negotiating the contract, faced a number of difficulties since their authority was limited.

In every instance, the negotiating committee made its decisions in keeping with the authorization of the House of Delegates. As a result, a number of decisions were tentatively included in the contract and will come up again for negotiation at the conclusion of the present seven month contract period. Since many differences did arise, your negotiating committee composed of the Chairman of the Board of Trustees, the attorney for the Tennessee State Medical Association and the Executive Secretary returned to Nashville without signing the contract, inasmuch as they felt that more study was needed before commiting anything to writing.

No Doctor Is Obligated

● No physician is under obligation to participate and may even refuse any individual case without having to state a reason. Dependents Medical Care is a full service program meaning specifically no charges to the patient except where stipulated by law and regulation. For private civilian care, chief program features are:

Dependent Eligibility

● Civilian care is limited to dependent spouses and children of service personnel who—for the first contract period through June 30, 1947—will have full free choice between private and military care.

Fee Schedule

● A full service fee schedule—designed by Tennessee physicians—will govern payment for doctors' services. Schedule and "how to" manual will be furnished to Tennessee physicians.

Who Is Eligible

● Lawful dependent spouses and children of uniformed services personnel. Children must be unmarried and under 21 unless totally disabled; unmarried dependent children in approved colleges up to age 23 are eligible. No private care for widows, widowers, parents or parents-in-law.

How Are Spouses and Children Identified?

● By means of a pocket card, "Dependents Authorization for Medical Care," Department of Defense Form 1173, on which names of eligible dependents will be listed. The government may be slow in providing these cards to service personnel. Certain data must be copied from the card for the claim form.

How Are Bills Rendered?

● A one-page claim form furnished by the fiscal agent and it will be returned to the fiscal agent, the Tennessee Hospital Service Association, Blue Cross Building, Chattanooga, Tennessee.

Time to Elect Officers

● Doctors of Tennessee must give careful attention to elections in their own county medical societies during December.

The importance of developing and maintaining a strong, active local medical society cannot be over-stressed. It is at the county level, where the physician deals with the day to day problems, that medical policy should begin.

Render Important Service

● You can,therefore, render no more important service to your patients, your profession, and yourself, than to contribute to a strong county medical organization. (1) Hold your annual election of officers in December. (2) Seek to get the best leadership possible. (3) Elect county society secretary, keeping him in office at least three years. (4) Report new officers and delegates promptly to the Headquarters Office. Necessary forms will be sent to all county societies early in January. Well organized and well informed county medical societies make for a strong state medical association.

Public Service

THE TENNESSEE TEN

Getting Away With Murder

● Leading pathologists believe Tennessee is an ideal state in which to live if you want to get away with murder.

The fact is, they state, that any number of deaths being certified today as "heart attack" could actually be the result of poisoning. Only an autopsy can determine the cause of death in such cases. Yet Tennessee laws are such that many times an autopsy cannot be performed routinely, even where there is cause for suspicion.

And, what is even more disturbing, new poisons are being developed almost every year. Although now available only to scientists, there is no way of knowing when one of the difficult-to-detect poisons, such as a so-called "nerve gas," will fall into the hands of killers.

Without laws which enforce routine autopsy in all cases where there is no previous illness, nor any medical history of heart trouble or some other ailment likely to lead to sudden death, there will be no way of knowing whether or not dangerous new poisons have been compromised. There will be no way to tell how many people are being murdered by this insidious means.

Attorneys, law enforcement officers, and pathologists are not the only people who realize how our laws operate. We must not deceive ourselves. The criminal's operating overhead is his risk of detection by the law. Many would-be criminals weigh this risk rather carefully and calculate the extent to which they will engage in crime by measuring the risk involved, and the probable consequences, should they be caught. Their willingness to take a risk is much of the time in direct proportion to the likelihood of detection.

The law, of course, prescribes the outer limits of this risk. How well the law is enforced determines the practical confines of the criminal's risk. These concepts are elementary, but they are reviewed here to point up the fact that in Tennessee, the clever poisoner runs very little risk indeed. He is sheltered because he knows autopsy is a last resort. He has access to modern poisons, but enforcement officers have little opportunity nor any legal enjoinment to bring in a qualified pathologist who can detect these poisons.

Of course, poisoning is but one of many means used to murder people. An autopsy in all suspicious deaths, performed by a trained pathologist, would supplant the coroner's report with a powerful weapon. It would serve as a strong deterrent to anyone planning to get away with murder in Tennessee.

Legislative and Public Policy Committee Met

● The TSMA Legislative and Public Policy Committee held its annual meeting in Nashville November 18 to outline their program for the 1957 State Legislature which convenes in January.

Doctors to Ask Hike in Indigent Aid

Dr. L. W. Edwards, Nashville, told the committee that five other state agencies and organizations will join with TSMA efforts to increase the state appropriations for the Indigent Hospital Service Program from $300,000 to $1,500,000 for the forthcoming biennium.

Bill to Outlaw Fireworks Sales

The legislative program also includes a bill to outlaw the sale of fireworks in Tennessee except for public displays. Dr. Byron O. Garner, Union City, told the committee that laws prohibiting the sale of fireworks in 38 states have reduced accidents maiming and killing children by 93 per cent.

Coroner System Revision

Dr. J. Robert Teabeaut, II, Shelby County coroner, reported to the committee that the machinery for getting an autopsy performed by a doctor in cases of suspicious death were "cumbersome." The committee endorsed a plan which would call for revision of the coroner system to allow for medical examiners to determine when an autopsy is necessary in such cases of "mysterious" death.

Expanded Speech And Hearing Centers

The Committee also pledged support to the Tennessee Speech and Hearing Association's forthcoming request for new bond issues from the Legislature for expanding speech and hearing centers in Tennessee. "Ten per cent of our children have hearing or speech defects," said Dr. W. W. Wilkerson, Nashville, committee chairman. He added that 90 per cent of these children are capable of rehabilitation.

Legislative Rallies in Progress

● Legislators, government officials and civic leaders met to discuss Tennessee's Indigent Hospital Service Program in a series of ten meetings held in various parts of the state beginning November 13 and extending through December 6.

Groups met at Johnson City, Nov. 13; Knoxville, Nov. 14; Chattanooga, Nov. 15; Cookeville, Nov. 19; Lewisburg, Nov. 20; Union City, Nov. 21; Memphis, Dec. 3; Trenton, Dec. 4; Savannah, Dec. 5 and Nashville, Dec. 6. They were shown the motion picture, "Battle Against Death" and were given the facts on the program and its progress to date, by a member of the Tennessee State Medical Association.

Study Committee Formed

● Out of this has come a Citizens Study Committee for Indigent Hospitalization which has reported its findings and recommendations to Governor Frank G. Clement. The committee found, when it compared the needs of the indigent program from various sections of the state, that the program will need at least $1,500,000 for the next biennium. The findings of the group bore out the fact that unless the program is given an adequate appropriation, it will perish and the indigent sick will suffer.

After pioneering in the development of a plan that is both humanitarian and equitable, which provides money to hospitalize those who cannot help themselves and provides it in exact proportion as it is needed, without embarrassing the recipients of this charity, and without subjecting counties to troublesome and bureaucratic controls and restrictions from the state, Tennesseans now find themselves about to lose the true effectiveness of the plan for lack of money to finance it.

It was argued, and perhaps justly so, that the small initial appropriation would determine whether the plan would work and would test its effectiveness and its appeal in county governments. The plan has worked. County screening committees have gotten the cooperation of the doctors, tax dollars have been spent wisely, all but six of our ninety-five counties have adopted the plan. What is more important, the indigent have received the care the program intends should be provided, but, it is disturbing to note, present appropriations furnish only a bare fraction of the care which is needed.

are unhappily many physicians who feel that the practice of medicine is a sufficient public service for anyone to render. By and large this attitude results from an incomplete knowledge of the facts, and it is here that a little indoctrination can go a long way. I heartily recommend that at least one regular meeting of the medical society a year be devoted to this indoctrination, and that the indoctrinator or indoctrinators be individuals well versed in the subject. Within our own state our Public Service Director and our Executive Secretary are available, and the American Medical Association stands ready to dispatch such excellent protagonists as Steve Donohue and others to aid the individual medical society in developing its program.

In this job of selling those few but hardy members who react to the proposal of a Public Service program with the same vociferous objection they would give to a proposal to double dues, it might be excusable to come down off the high pedestal of the real philosophy of public service and express it in terms which they can understand. It might be well to point out that after all society's attitude toward the profession of medicine is directly proportional to medicine's attitude toward society.

Medicine is a noble profession, and the physician is unworthy of his calling when he is less than noble. The demands upon the integrity and the nobility of the physician are no less exacting than the demands upon his time and energy. His is therefore inescapably a dedicated life. It is in reality a high compliment to the medical profession that society expects so much of it, and that the society is outraged when it witnesses instances of dishonor, selfishness, and lack of concern for the inadequacies and the misfortunes of others on the part of the profession. The public takes it for granted that greatness is a constant characteristic of the physician and nothing less than greatness will preserve medicine as a profession in the estimation of the people whom it seeks to serve. This service cannot be limited to the treatment of the ills and complaints of those whom the physician sees in his daily rounds. It must extend to those other fields which we call public service, and only if it does will the physician find himself in the high esteem of his friends, patients and colleagues, esteem to which he almost invariably aspires.

Finally, my *third point* is that adequate plans and organization must be developed for carrying out the Public Service program decided upon. Every medical society should have a standing Public Service Committee, headed by a physician dedicated to the principles of Public Service which we have already discussed, and composed of as many members as is necessary to carry out the program. It is desirable that the membership of this committee should be hand-picked by the Chairman, each member carefully chosen because of previous demonstrations of his ability, interest, and faithfulness. It is not enough to name members to this committee simply because it is time a certain member was appointed to a committee or because he wants to see his name in the medical society bulletin. This is to be a working committee, a policy forming committee, and a committee entrusted with carrying out the desires of the Society. Each member appointed to this committee should know this beforehand and should give his assent to his appointment with the full knowledge that he will be expected to meet often, work hard, and receive little praise. As to the mechanics of the organization of the committee I think it is a good idea to have a Vice-Chairman as an understudy to the Chairman, who will presumably take his place when he vacates the chair. It is also well, I think, to stagger the term of membership on this committee so that a completely new committee never needs to be appointed as the administration of the society changes. The Public Service Committee of the medical society should give frequent reports to the Executive Committee of the society, or its authoritative equivalent. The Public Service Committee should have a generous budget based on actual and anticipated needs, and should not be put in the position of having to beg for every dollar it gets to carry out its program. In this regard a sympathetic Secretary-Treasurer of the medical society, which the Knoxville

Academy of Medicine has, is a tremendous asset to an active Public Service Committee. We must not lose sight of the fact, however, that the Public Service Committee is the planning and the organizing general staff and that the execution of its plans are not to be left to it exclusively. As many members of the medical society as can be persuaded to join in should be utilized in the carrying out of this program. Specifically where personal appearances such as on radio, television and in speaking engagements are called for, a rotation system should be used in order to spread the work among the society membership as well as acquaint each individual member with some of the personal satisfaction obtained in extending this kind of service. I might also add here that the Medical Auxiliary is a force which should not be underestimated and which should be utilized as much as possible.

One further suggestion which I think might be helpful is that the Chairman of the Public Service Committee should be encouraged to attend the A.M.A.'s annual Public Relations Institute held the latter part of August in Chicago. He can possibly best be encouraged to attend that very excellent meeting by providing an item in the public service budget of the medical society to defray his expenses. I have been privileged to attend two of these meetings and can truthfully say that they are most instructive, helpful, and down-right entertaining.

It is hoped that in these three points I have covered the subject but have not smothered it. Much could be added, I am sure, by many more capable than I, but I will leave it at that. I would like to reemphasize one belief which I stated in the beginning, that a good Public Service program just naturally leads to good public relations. I bring this up again for the purpose of making clear that I do not believe that the acquisition of good public relations for a medical society is the principal reason for a Public Service Program, but is more or less a by-product. In spite of all that has been said in the past few years concerning the slipping of the physician in the esteem of the public, I am firmly convinced that as physicians we still occupy a high spot in the hearts and minds of society in general, all of which should bring us to a greater realization of our responsibilities to it.

DEATHS

Dr. Samuel H. Long, 71, Chattanooga, died November 10th at his home. He was a former President of the Chattanooga-Hamilton County Medical Society.

Dr. William Howard Enneis, 62, Knoxville, died November 8th at Presbyterian Hospital.

Dr. Frank Graham, 80, Memphis, died October 29th at his home.

Dr. Marvin G. Rock, Bristol, died November 2nd in Bristol Memorial Hospital.

Dr. John E. Carne, 42, Dyersburg, died suddenly on November 27th. Dr. Carne was secretary of the Dyer-Lake-Crockett County Medical Society and was active in medical organizations in northwest Tennessee and throughout the state.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The Society met in regular session in the Institute of Pathology on September 4. The scientific program was as follows: (1) "Anaphylactoid Reactions to Bee and Wasp Stings—Method of Specific Hyposensitization" by Dr. Lloyd Crawford, discussion by Dr. Sam Raines and Dr. C. D. Marsh; (2) "Variability of Site of Herpes Zoster" by Dr. L. I. Goldsmith, discussion by Dr. Phil Lewis and Dr. J. F. Hamilton; (3) "Local Infiltration of Hydrocortisone in the Treatment of Postherpetic Neuralgia," by Dr. A. M. Lefkovits; and (4) "The Surgical Corrections of Bilateral Ureteropelvic Obstruction in the Horseshoe Kidney" by Dr. John B. Hamsher.

Nashville Academy of Medicine and Davidson County Medical Society

The society conducted its regular monthly meeting on November 13. A new type of scientific program was presented involving all branches of medicine. Discsusion of the over-all topic, "Gastrointestinal Diseases"

was directed by moderators of subsections at various tables as follows: (1) "Allergic Gastrointestinal Disease in Children"—Dr. James C. Overall; (2) "Treatment of Pancreatitis"—Dr. Herschel Graves, Jr.; (3) "Intestinal Parasites"—Dr. Alvin Keller; (4) "Surgery in Peptic Ulcer"—Dr. Edmund Benz; (5) "Bleeding Esophageal Varices"—Dr. Douglas Riddell; (6) "Role of Peritoneoscopy"—Dr. William J. Card; (7) "Regional Ileitis and Enteritis—Concepts and Therapy"—Dr. Wm. Alsobrook; (8) "X-ray: Role, Functions and Illustrations" Dr. John Beveridge. The moderator at each table opened the discussion with a brief outline of some of the problems involved, and submitted questions to members of the group.

Roane County Medical Society

The Society met at the Oak Ridge Hospital on October 26. The scientific program was by Dr. Marshall Brucer, Chairman of the Oak Ridge Institute of Nuclear Studies on the subject of "New Methods for Iodine Uptake."

Hamblen County Medical Society

The regular meeting was held on September 4 at the Public Health Building. Following a business meeting, Dr. Park Nicely, of Knoxville, discussed urological complications, particularly those following pelvic and abdominal surgery of interest to general practitioners.

Knoxville Academy of Medicine

The Society met in the Knoxville Academy of Medicine building on November 13. After the annual election of officers, Dr. Cyrus H. Maxwell, of the American Medical Association's staff in the Washington Office, gave a talk on the "Washington Scene in Medicine."

Chattanooga-Hamilton County Medical Society

The Society's regular meeting was held November 1 in the Interstate Building. The scientific program was as follows: a paper on "Ulcerative Colitis" by Dr. Edward G. Johnson and one on "Tumors of the Thyroid Glands" by Dr. Jack Adams. There was also a discussion on the use of the funds held by the society.

NATIONAL NEWS

The Month in Washington

Federal health and medical spending for all agencies of government this fiscal year is expected to reach a new high peak. The total is placed at $2,558,719,168, an increase of nearly 13% over the last fiscal year, which itself set a new record.

The spending is spread among 21 departments, agencies and commissions concerned in whole or in part with health or medicine. They range from an impressive $825,024,300 for the Veterans Administration to a small sum of $12,145 for running the Office of the Attending Physician of Congress.

In between is a broad range of health and medical activities, including money for implementing the many health programs inaugurated by the 84th Congress. The totals are compiled each year by the American Medical Association's Washington Office. The report, the only consolidated Federal medical budget published, is based on actual appropriations by Congress and program data supplied by the federal agencies.

The medical budget total, divided into cost for each man, woman and child in the country, amounts to $15.17 a year, while each family in the U.S. will be paying $54.61 for this spending, based on Census Bureau figures for population, family size and employment.

Compared with last year's spending, the Defense Department has dropped to second place with its spending estimated at $790,105,000, thus giving way to the V.A. The Defense Department shift from the top spending spot, despite a $1 million item for the new dependent's medical care program, is due primarily to more effective joint utilization of facilities, fewer personnel assigned to operation and a planned drop in hospital and dispensary construction.

Department of Health, Education, and Welfare spending for the year ending next July 1 amounts to $772,661,800, which puts that agency's total within striking distance of the two top spenders in the health-medical field. Compared with last year's $526,935,400, HEW spending this year is up a resounding 46%, due in part to more Hill-Burton hospital construction money, record research funds, and permanent and total disability payments.

Following is a table of spending by the 21 agencies this year and last:

Agency	*Fiscal 1957*	*Fiscal 1956*
Veterans Administration	$825,024,300	$790,185,800
Department of Defense	790,105,000	818,104,500
Department of Health, Education & Welfare	772,661,800	526,935,400
Federal Civil Defense Administration	49,810,000	30,450,000
Atomic Energy Commission	31,525,000	27,700,000
International Cooperation Administration	29,310,000	25,441,000
Department of State	15,496,000	13,669,790
Federal Employees Health Program	10,000,000	6,000,000
National Science Foundation	8,000,000	5,000,000
Department of Labor	7,151,126	7,336,000
Department of Interior	6,138,205	5,770,000
Panama Canal Zone	6,055,300	5,702,900
Department of Treasury	3,511,700	2,990,000
Department of Justice	1,580,000	1,470,000
Federal Trade Commission	1,000,000	1,000,000
Department of Commerce	547,914	277,586
Civil Service Commission	386,000	382,600
National Advisory Committee to Selective Service	180,000	180,000
President's Comm. for Handicapped	134,678	130,000
Health Resources Advisory Comm.	90,000	101,000
Office of Attending Physician of Congress	12,145	
TOTALS	$2,558,719,168	$2,268,826,576

The long-awaited military dependents' medical care program authorized by the last Congress went into effect December 7. At the height of the program, as many as 800,000 persons not now getting care are expected to be receiving treatment either at military facilities or through private physicians and hospitals. It was launched following a series of negotiations with state medical societies over contracts covering the provision of care outside military hospitals and clinics.

★

With the death of Rep. Percy Priest of Tennessee and the election of a Democratic House, Rep. Oren Harris, Democrat, of Arizona, assumes chairmanship of the important House Interstate and Foreign Commerce Committee. It handles most health legislation in the House. The companion Senate Committee on Labor and Welfare again will be headed by Senator Lister Hill (D., Ala.). (A.M.A. Washington Newsletter.)

AMA Surveys Hill-Burton Program

An AMA study of the Hill-Burton Hospital Construction Program is now under way. Conducted by the Council on Medical Service, the survey will cover the first ten years of the programs operation. It is being undertaken to determine to what extent the original objectives are being fulfilled, what effect recent progress in medical and hospital care may have had on these objectives, and what changes, if any, might be suggested to improve the program. Since recent amendments to the Hill-Burton program include provision for diagnostic and treatment centers, this study should be of particular interest to medical societies and individual physicians.

MEDICAL NEWS IN TENNESSEE

Hill-Burton Grants in Tennessee

The Department of Health, Education, and Welfare reports that as of October 31 the status of all Hill-Burton grants for the state of Tennessee is: Projects approved during past month: (1) Carroll County Health Clinic, Huntingdon, total estimated cost $80,000, approved federal share $41,000 (2) Holston Valley Community Hospital, Kingsport, $1,200,000 of which $388,000 is federal funds. This is for an additional 125 beds in this hospital.

Approved but not yet under construction are 66 projects at a total cost of $58,002,478, including $21,204,958 in federal contribution and designed to supply 2,959 additional beds. Under construction are 18 projects at a total cost of $10,199,220, including a federal contribution of $4,184,995 and designed to supply 726 additional beds. Completed and in operation are 14 projects at a total cost of $4,035,820 including a federal contribution of $1,849,626 and supplying 310 additional beds.

Diabetes Detection Drive

A number of cities and counties throughout the state participated in Diabetes Detection Week from November 11-17. In the

communities reporting, it was found that approximately 15,000 persons were tested in the city and county in Knoxville. Dr. John W. Avera, Knoxville, was chairman for the drive.

An estimated 35,000 people were to be tested by the Drey Pak method at Nashville. Testing units were distributed to Nashvillians by boy scouts from 68 groups and to 4,600 employees of seven organizations which contributed toward the purchase of Drey Pak Kits.

University of Tennessee College of Medicine

A $2,000 gift has been received for research on cancer or blood disease. The gift will be used to supplement existing grants to investigate the cause and cure of cancer or blood diseases.

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Dr. Ralph F. Morton, of the Department of Medicine has been awarded the C. Riley Houck Investigatorship established by the Tennessee Heart Association. The award, with a stipend of $7,200 for the first year, was established in memory of the late Dr. Houck, associate professor of physiology, who was doing research work in diseases of the heart and blood vessels.

Medical TV Show Originated at Memphis

Medical Horizons, the ABC-TV show which is carried nationally originated in Memphis October 28. The subject was toxemia of pregnancy, a major cause of premature birth. The program dealt chiefly with prenatal care. The network cameras visited John Gaston Hospital and the show was seen across the nation.

Middle Tennessee Medical Association

The Association held its one hundred twenty-fourth semiannual meeting at the Graymere Country Club at Columbia on November 15, meeting under the presidency of Dr. Daniel R. Gray, Jr., Columbia.

The program was as follows: "Current Treatment of Purulent Meningitis," by Dr. Robert Merrill, Tullahoma; "Management of Bursitis of Shoulder, Acute and Chronic," by Dr. Arnold Haber, Nashville; "New Concepts in Treatment of Cleft Lip and Palate," by Dr. Beverly Douglas, Nashville; "Endometriosis," by Dr. Mildred Casey, Columbia; "Treatment of Tetanus," by Dr. Thomas Frist, Nashville; "Emergency Treatment of Trauma," by Dr. Parker Elrod, Nashville; "Six Years Experience with the Use of Radio-active Iodine in the Treatment of Thyrotoxicosis," by Dr. Albert Weinstein, Nashville.

The East Tennessee Heart Association

A meeting was held in Knoxville, on November 28, with Dr. Louis A. Killeffer of Harriman, presiding. After the address of welcome by Dr. Ben M. Overholt of Knoxville, the following program was offered: "Differential Diagnosis of Chest Pain," by Dr. Herman K. Hellerstein of Cleveland, Ohio; "Diagnosis and Treatment of Angina Pectoris," by Dr. J. Willis Hurst, of Atlanta; "Diagnosis and Management of Peripheral Vascular Disease," by Dr. Ralph A. Deterling, Jr., New York.

Dr. William C. Crowder of Maryville, presided at the afternoon meeting with papers on: "Diagnosis and Treatment of Myocardial Infarction," by Dr. Hurst; "Diagnosis and Treatment of Surgical Diseases of the Aorta," by Dr. Deterling; "The Rehabilitation of the Cardiac Patient," by Dr. Hellerstein.

A Panel Discussion included as panelists in addition to the three guest speakers Doctors Robert J. Brimi and Bruce R. McCampbell of Knoxville.

Dr. J. E. Acker, Jr., President of the East Tennessee Heart Association, presided at the banquet. Dr. John G. Smith, of Rocky Mount, N. C., was the after dinner speaker on "The Past, Present and Future of Heart Research."

Southern Medical Association

The Annual Session and Golden Anniversary Celebration held in Washington, D. C., on November 12-15, was attended by 96 Tennessee physicians. Total attendance was 3173 doctors.

PERSONAL NEWS

Dr. Harwell Wilson, Memphis, was the guest speaker in New Orleans at the Ninth Annual Meeting of the Surgical Association of Louisiana. His subject was "The Acute Surgical Abdomen."

Dr. Roland D. Lamb, Nashville, has recently

been made a Fellow in the American College of Surgeons.

Dr. C. Harwell Dabbs, Knoxville, has been initiated into the American College of Surgeons as a fellow at the recent meeting in San Francisco.

Dr. William Albert Lewis, Pulaski, was honored on November 11th at the William Albert Lewis' Day. He had been in practice 50 years and was honored for public service to the community.

Dr. Laurence A. Grossman, and **Dr. B. F. Byrd, Sr.,** Nashville, attended the American Heart Association meeting in Cincinnati. Other physicians from Nashville attending were **Drs. Crawford Adams, Milton Grossman, Rudolph Light, George Meneely** and **Samuel S. Rivin.**

Dr. Henry B. Turner, Dr. R. Overman and **Dr. John Q. Adams,** Memphis, recently participated in the television program "Medical Horizons."

Presenting papers at the 50th annual meeting of the Southern Medical Association were **Drs. Harwell Wilson, Edward Storer, McCarthy DeMere, Malcolm Aste, Phil C. Schreier, B. E. Everett, Samuel L. Raines, Wm. H. Morse, David S. Carroll** and **Robert Teabeaut,** all of Memphis.

Dr. Paul Johnson, Jr., Chattanooga, has announced the opening of his office for the practice of obstetrics and gynecology in the Medical Arts Building. He will be associated with Drs. Paul Johnson, Sr. and Joseph W. Graves.

Dr. C. M. Clark, McMinnville, recently headed a fund drive for the Red Cross Blood program in Warren County.

Dr. William Carter Keeton, Hohenwald, has announced the opening of his office for the practice of medicine and surgery. He will be associated with Dr. W. E. Boyce at the Boyce Clinic.

Dr. R. A. Davison, Memphis, recently addressed the Ohio Academy of General Practice at Cleveland.

Dr. G. Conner Lyons, Surgoinsville, has been elected Mayor of that city.

Dr. E. L. Caudill, Sr., Elizabethton, has been appointed to work with the city and county committee on the new hospital.

Dr. John B. Turner, Springfield, has announced the opening of his office for the practice of medicine.

Dr. M. R. Beyer, Dresden, was recently featured as "Man of the Week" by the Dresden Enterprise.

Dr. James W. Hall, Trenton, spoke at the recent meeting of the Business Women's Club at Humboldt. His topic was "Obesity."

Dr. Luis Carlos Prieto, Jr., Memphis, has assumed the duties of pathologist at St. Joseph Hospital.

Dr. Arthur A. McMurray, Clarksville, announces the opening of his office for the practice of medicine.

Dr. Howard R. Kennedy, Clarksville, announces the opening of his office for practice limited to diseases and surgery of the ear, eye, nose and throat.

Newly elected officers of the Jesse Jones Hospital in Springfield are **Dr. John S. Freeman,** President; **Dr. Ken Mattox,** Vice-President; **Dr. John M. Jackson,** Secretary-Treasurer.

Dr. M. K. Moulder, Nashville, announces removal of his office for the practice of Urology to 211 23rd Avenue North.

Dr. Randolph A. Cate announces the opening of his office in Fayetteville. Doctors **Robert C. Patterson, Jr.** and **Homer M. Pace, Jr.,** Nashville, announce the removal of their office for the practice of obstetrics and gynecology, to 610 Gallatin Road.

ANNOUNCEMENTS

Postgraduate Courses on Diseases of the Chest

The council on Postgraduate Medical Education of the American College of Chest Physicians will present the following Postgraduate Courses on Diseases of the Chest during the period January-April, 1957. The first will be given in Nashville at Vanderbilt University on January 14-18, 1957. Others will be presented at the Mark Hopkins Hotel, San Francisco, February 25-March 1, and the third at Bellevue-Stratford Hotel, Philadelphia, April 1-5. Tuition for each course is $75.00. Further information may be obtained by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Annual Meeting Scheduled

The general schedule of events for the 1957 annual meeting of the Tennessee State Medical Association which will meet in Nashville, is moving toward completion.

The meeting will be conducted on April 7-8-9-10 with the House of Delegates meeting in the afternoon of April 7. Monday, April 8th has been set aside for the general scientific meetings in the mornings and the specialty societies and various medical groups holding their meetings in the afternoon.

The general scientific meetings will be conducted in the Ballroom of the Maxwell House Hotel. Technical exhibits will also be located in this hotel.

Business sessions of the House of Delegates will be conducted on April 7 and the morning of April 9. Activities of the Woman's Auxiliary are presently scheduled to be conducted in the Hermitage Hotel. Much more will be released in the next few months relative to the completed plans of the annual meeting and the programs of the specialty societies meeting at the same time of the Annual Meeting of the TSMA.

1956 MEMBERS OF TENNESSEE STATE MEDICAL ASSOCIATION

The list of members of the Tennessee State Medical Association is published in compliance with a provision of the Constitution and By-Laws. The data are accurate as of December 10, 1956. They are arranged in the following order:

List of active members.

Counties arranged alphabetically.

Towns in each county arranged alphabetically and the members in each town arranged alphabetically.

List of members residing outside the state arranged alphabetically.

List of veteran members.

List of members who have died in the year 1956.

ANDERSON COUNTY

Clinton

A. W. Bishop
J. S. Hall
Henry Hedden, Jr.
John J. Smith
Nathan B. Williams (Mem. Roane Co. Soc.)

Lake City

J. M. Cox
R. B. Scott

Norris

S. G. McNeeley

Oliver Springs

F. O. Stone
S. J. Van Hook (Mbr. Roane Co. Soc.)

BEDFORD COUNTY

Shelbyville

W. H. Avery
James N. Burch
W. L. Chambers
A. L. Cooper
John S. Derryberry
Alfred Farrar
Taylor Farrar
Grace Moulder
Carl Rogers
Sara Womack

BENTON COUNTY

Camden

J. Mansfield Bailey
Wm. H. Blackburn
Joe S. Butterworth
A. T. Hicks
R. L. Horton

BLEDSOE COUNTY

Pikeville

Thomas G. Cranwell (Mbr. Hamilton Co.)

BLOUNT COUNTY

Alcoa

Oliver K. Agee

Maryville

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K. A. Bryant
Henry A. Callaway
Lea Callaway
Mary D. Cragan
W. C. Crowder
Lynn F. Curtis
W. N. Dawson
R. H. Haralson
Joe Henderson
J. S. Henry
Thomas Holder
H. L. Isbell
E. P. Kintner
Beulah Kittrell
Samuel S. Lambeth
Ray Laughmiller
Julian C. Lentz
C. B. Lequire
Robert F. Leyen
F. S. Lovingood
J. M. McCulloch
J. F. Manning
Jack Phelan
James N. Proffitt
B. P. Ramsey
Trent Vandergriff
Lowell E. Vinsant
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*In Service

BRADLEY COUNTY

Cleveland

D. N. Arnold
Wesley A. Barton
Marvin Batchelor
Chalmer Chastain
E. R. Ferguson
Jack R. Free
Wm. A. Garrott
C. S. Heron
Ivan C. Humphries, Jr.
J. C. Lowe
Joseph McCoin
Wm. I. Proffitt
C. T. Speck, Jr.
W. C. Stanbery
S. J. Sullivan
Claud H. Taylor
Madison S. Trewhitt
Gilbert Varnell

CAMPBELL COUNTY

Caryville

Chas. Rogers

Jellico

C. E. Ausmus
Charles A. Prater
Ned C. Watts

La Follette

M. L. Davis
P. T. Howard
P. J. O'Brien
J. W. Presley
John C. Pryse
R. C. Pryse
James W. Riggs
L. J. Seargeant

CANNON COUNTY

Woodbury

William A. Bryant (Mbr. Rutherford Co.)
Alexander McLarty (Mbr. Rutherford Co.)
Russell E. Meyers (Mbr. Rutherford Co.)

CARROLL COUNTY

Bruceton

R. T. Keeton
L. E. Trevathan

Huntingdon

R. A. Douglass
R. B. Wilson

McKenzie

E. E. Edwards, Jr.
J. T. Holmes

Trezevant

James E. Moseley
James H. Robertson

CARTER COUNTY

Elizabethton

Hoyle E. Bowman
E. L. Caudill, Sr.
E. L. Caudill, Jr.
W. G. Frost
John A. Knapp
E. T. Pearson
J. S. Shaver
Dillard Sholes
James M. Willett

CHEATHAM COUNTY

Ashland City

J. P. Glover, Jr. (Mbr. Davidson Co.)

CHESTER COUNTY

Henderson

H. D. Farthing
Ernest P. Guy
O. M. McCallum

CLAIBORNE COUNTY

New Tazewell

H. C. Evans (Mbr. Knox Co.)
George L. Rea (Mbr. Knox Co.)

COCKE COUNTY

Newport

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Drew A. Mims
L. S. Nease
Wm. B. Robinson
W. C. Ruble, Jr.
Glen C. Shults
Fred M. Valentine
Fred M. Valentine, Jr.

COFFEE COUNTY

Manchester

Clarence H. Farrar
Howard A. Farrar
Coulter S. Young

Tullahoma

R. L. Brickell
Jack T. Farrar
B. E. Galbraith
Edwin E. Gray, Jr.
J. M. King
Edward Maurer
Robert E. Merrill
C. C. Snoddy
Bryant S. Swindoll

CROCKETT COUNTY

Alamo

E. O. Prather, Jr.

Bells

E. Farrow
F. P. Hess
Charles N. Hickman
S. E. McDonald
R. W. Mayfield
Wm. R. Sullivan

Maury City

Joseph E. Crupie

CUMBERLAND COUNTY

Crossville

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Donathan Ivey
H. F. Lawson
Robert M. Metcalfe
Stuart P. Seaton
M. M. Young

Pleasant Hill

Margaret K. Stewart

DAVIDSON COUNTY

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Chas. H. Huddleston
James W. Manier
Luther E. Smith
Wm. B. Wadlington

Goodlettsville

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R. L. Whittaker (Mbr. Robertson Co.)

Madison

Frederee B. Cothren
Robt. L. Pettus, Jr.
Ora Wayne Ramsey
Joe E. Sutherland
Harry Witztum

Madison College

Julian C. Gant
George E. Horsley
Gilbert H. Johnson
Cyrus E. Kendall
Naomi K. Pitman
James D. Schuler
Jean M. Slate

Nashville

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Crawford Adams
R. W. Adams, Jr.
J. W. Alford, Jr.
Joseph H. Allen
Wm. E. Allison
Clyde Alley
Ben J. Alper
W. L. Alsobrook
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Edwin B. Anderson
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James P. Anderson
Joe D. Anderson
Robt. S. Anderson
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G. F. Aycock
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Preston H. Bandy
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Randolph Batson
David S. Bayer
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Lynch Bennett
Edmund W. Benz
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F. T. Billings, Jr.
Geo. T. Binkley, Jr.
Russell Birmingham
Lindsay K. Bishop
Hubert Blakey
James B. Boddie, Jr.
Geo. W. Bounds
Anna M. Bowie
John M. Boylin
H. B. Brackin
H. B. Brackin, Jr.
Cloyce F. Bradley
G. Hearn Bradley
David V. Bradley
T. F. Bridges
Geo. B. Brothers
M. F. Brown (Mbr. Lincoln Co.)
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William J. Card
M. A. Carnes (Mbr. Blount Co. Soc.)
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Oscar W. Carter
Norman M. Cassell
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W. R. Cate, Jr.
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Lee F. Cayce
Robert L. Chalfant
Amos Christie
Everett M. Clayton, Jr.
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Orrie A. Couch, Jr.
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T. W. Davis
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L. Rowe Driver
Ray L. Dubuisson
Price Duff
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L. W. Edwards
Phillip C. Elliott
Irwin B. Eskind
Harry M. Estes
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Don L. Eyler
John L. Farringer
Wm. H. Faulkner
R. O. Fessey
Robert M. Finks
Robert M. Foote
Howard R. Foreman
Garth E. Fort
S. Benjamin Fowler
Richard France
Herbert C. Francis
John W. Frazier, Jr.
Thomas Fern Frist
James L. Fuqua
Robert K. Galloway
Chas. K. Gardner
J. C. Gardner
Sam Y. Garrett
R. S. Gass (Mbr. Williamson Co.)
Hamilton V. Gayden
Horace C. Gayden
John R. Glover
Fred Goldner
James Goldsberry
Robt. A. Goodwin
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Herschel A. Graves, Jr.
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Laurence A. Grossman
Milton Grossman
Wm. E. Gupton, Jr
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Chas. E. Haines, Jr.
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C. M. Hamilton
W. M. Hamilton
Roy G. Hammonds
Anderson P. Harris
Robt. C. Hartmann
A. B. Harwell
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J. L. Herrington
John G. Herzfeld
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J. B. Hibbitts, Jr.
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John W. Hillman
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J. Harvill Hite
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Chas. F. Hollabaugh
Wm. K. Howard
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Alfonso P. Johnson
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Ira T. Johnson, Jr.
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J. A. Kirtley, Jr.
O. Morse Kochtitzky
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Roland D. Lamb
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Horace T. Lavely, Jr.
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A. R. Lawson
G. Allen Lawrence
Jas. D. Lester
James P. Lester
Milton S. Lewis
Richard C. Light
Rudolph Light
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Joanne Linn
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L. S. Love (Mbr. Putnam Co.)
C. M. Looney (Mbr. Robertson Co.)
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S. L. Lowenstein
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Philip L. Lyle
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Guy Milford Maness
W. R. Manlove
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Travis H. Martin
Jas. Andrew Mayer
Ben R. Mayes
G. S. McClellan
Robt. E. McClellan
C. C. McClure
C. C. McClure, Jr.
Robt. L. McCracken
C. S. McMurray
M. Chas. McMurray
Barton McSwain
Wm. F. Meacham
Arnold M. Meirowsky
Cleo M. Miller
Lloyd C. Miller
Harry T. Moore, Jr.
Theodore Morford
Hugh J. Morgan
N. B. Morris

P. G. Morrissey, Jr.
M. K. Moulder
Oscar G. Nelson
Dewey Nemec
E. V. Newman
Oscar F. Noel
D. Douglass Odell
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Fred D. Ownby
Homer M. Pace, Jr.
Roy Wm. Parker
Thomas F. Parrish
Bernard Pass
R. C. Patterson, Jr.
C. Gordon Peerman, Jr.
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George L. Perler
M. A. Petrone
David Pickens, Jr.
Bruce P'Pool
Samuel B. Prevo
Chas. C. Randall
James Seay Read
E. M. Regen
John R. Rice
S. R. Reichman
Greer Ricketson
Douglas H. Riddell
H. D. Riley
Elkin L. Rippy
S. S. Riven
Ben H. Robbins
Joseph D. Robertson
Miller Robinson
Dan C. Rochm
Marvin Rosenblum
Sol Rosenblum
Louis Rosenfeld
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P. M. Ross
Robert N. Sadler
Dan Sanders, Jr.
Houston Sarratt
J. H. Sayers, Jr.
Lawrence G. Schull
Herbert J. Schulman
H. Wm. Scott, Jr.
A. B. Scoville, Jr.
George F. Seeman, D.D.S.
C. Gordon Sell
D. C. Seward
John L. Shapiro
Harry S. Shelley
Wm. F. Sheridan, Jr.
Abram Shmerling
N. S. Shofner
H. S. Shoulders
Harrison J. Shull
Ammie T. Sikes
T. E. Simpkins
Chas. B. Smith
Daugh W. Smith
Henry C. Smith
Marion L. Smith
Robt. T. Smith
Bertram Sprofkin
Daphine Sprouse
Lee Wm. Stewart
Frank W. Stevens
Hugh L. C. Stevens
Joe M. Strayhorn
W. D. Strayhorn
Richard C. Stuntz
Robt. E. Sullivan
Wm. D. Sumpter, Jr.
Arthur J. Sutherland
Richard P. Taber
G. T. Tarleton
Ed L. Tarpley
Pauline Tenzel
Robert T. Terry
C. S. Thomas
John B. Thomison
J. N. Thomasson
Chas. B. Thorne
W. O. Tirrill, Jr.
Kirkland W. Todd, Jr.
C. C. Trabue, IV
C. B. Tucker
Harlin G. Tucker
John M. Tudor
J. J. Vaughn, D.D.S.
Wm. O. Vaughan
Ethel Walker

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James W. Ward
Russell D. Ward
Thomas F. Warder
Paul L. Warner
R. J. Warner
Thomas S. Weaver
B. H. Webster
Albert Weinstein
Bernard Weinstein
Frank E. Whitacre
Joe T. Whitfield
W. W. Wilkerson, Jr.
Earl E. Wilkinson
Claiborne Williams
Edwin L. Williams
W. Carter Williams (Mbr. Smith Co.)
Frank G. Witherspoon
Frank C. Womack, Jr.
C. C. Woodcock
M. C. Woodfin
T. Volney Woodring
John R. Woods
John L. Wyatt
R. E. Wyatt
John B. Youmans
Kate Savage Zerfoss
Thomas B. Zerfoss
Thos. B. Zerfoss, Jr

Old Hickory

T. D. Dailey
E. P. Johnson
James K. Lawrence
R. P. Miller
E. B. Rhea
W. W. Wilson

DECATUR COUNTY

Parsons

H. L. Conger

DEKALB COUNTY

Alexandria

Odell Mason (Mbr. Smith Co.)

DICKSON COUNTY

Charlotte

Mary Baxter Cook
James C. Elliott (Mbr. Montgomery Co.)

Dickson

R. P. Beasley
W. A. Bell, Jr.
W. A. Crosby
J. T. Jackson
Lawrence C. Jackson
W. M. Jackson

DYER COUNTY

Dyersburg

W. E. Anderson
J. Paul Baird
Thos. V. Banks
James W. Bonds
Percy A. Conyers
Thomas W. Johnson
Robert T. Kerr
O. B. Landrum
J. B. Moody
J. C. Moore
J. G. Price
R. David Taylor
W. I. Thornton, Jr.
Lydia V. Watson

Newbern

J. T. Fuller
Wm. L. Phillips

FAYETTE COUNTY

Oakland

L. D. McAuley

Somerville

John L. Armstrong
Frank S. McKnight
John W. Morris
Wm. F. Outlan
Lee Rush, Jr.

FENTRESS COUNTY

Jamestown

Guy C. Pinckley
J. Peery Sloan

FRANKLIN COUNTY

Decherd

P. J. Flippin

Huntland

L. J. Stubblefield (Mbr. Lincoln Co.)

Sewanee

Ruth A. Cameron
Charles B. Keppler
E. W. Kirby-Smith
H. T. Kirby-Smith

Winchester

Jo C. Anderton
Reynolds Fite
Gerald E. Johnson
George L. Smith
James Van Blaricum (Mbr. Hamilton Co. Soc.)

GIBSON COUNTY

Dyer

F. Douglass
John W. Ellis

Humboldt

H. G. Barker
Chas. W. Davis
A. H. Fick
J. W. Oursler
Jas. D. Rozzell
George E. Spangler

Medina

Robert Morris

Milan

Geo. T. Burkett
H. P. Clemmer
James O. Fields
R. F. Hughes
F. L. Keil
Parks W. Walker, Jr.
Philip G. Williams

Rutherford

W. F. Bell (Mbr. Obion Co.)

Trenton

Edw. C. Barker
E. C. Crafton
James W. Hall
M. D. Ingram
W. C. McRee

GILES COUNTY

Ardmore

D. T. Strickler, Jr.

Bethel

L. A. Edmondson

Pulaski

Robert B. Agee
J. H. Hite, Jr.
W. J. Johnson
K. M. Kressenburg
Roy W. Money
W. K. Owen
J. U. Speer
D. M. Spotwood

GRAINGER COUNTY

Rutledge

L. C. Bryan (Mbr. Knox Co.)

Washburn

Robt. J. Phlegar (Mbr. Knox Co.)

GREENE COUNTY

Greeneville

V. R. Bottomley
Robert Brown
M. K. Butler
L. E. Coolidge
R. S. Cowles, Sr.
Robt. S. Cowles, Jr.
N. H. Crews
L. E. Dyer
*G. C. Ekvall
Luke L. Ellenburg
Haskell W. Fox
R. B. Gibson
J. G. Hawkins
Hal Henard
N. P. Horner
Robert Keeling
C. B. Laughlin
Haskell McCollum
W. Lewis McGuffin
R. W. McMullen

Mosheim

Dale Brown
G. R. Evans

GRUNDY COUNTY

Coalmont

L. F. Littell (Mbr. Warren, Van Buren Co.)

HAMBLEN COUNTY

Morristown

Howard T. Brock
John D. Caldwell
J. K. Cooper
Kemp Davis
C. J. Duby
G. I. Hislop
Y. Alvin Jackson
Robert E. Jones
John Kinser
F. J. Little, Jr.
*E. Gene Lynch
Harold B. Marble
Cecil F. Mynatt, Jr.
L. W. Nabers
John L. Pearce
J. W. Richardson
Powell M. Trusler
D. J. Zimmermann

HAMILTON COUNTY

Chattanooga

Chester Adams
John W. Adams
Julian Adams
Wallace Alexander
C. H. Alper
E. R. Anderson
Harry S. Anderson
J. J. Armstrong
I. L. Arnold
Merton Baker
Robert E. Baldwin
C. H. Barnwell
H. B. Barnwell
S. H. Barrett
Samuel S. Binder
W. R. Bishop
Robt. W. Boatwright
Robert J. Boehm
Walter E. Boehm
F. B. Bogart
J. W. Bradley
Frank S. Brannen
J. C. Brooks, Jr.
Louis P. Brooks
Reid L. Brown
James Y. Bryson
Arch H. Bullard
E. F. Buchner, Jr.
W. R. Buttram
W. R. Buttram, Jr.
John R. Cain
James L. Caldwell
Earl R. Campbell
Maurice A. Canon
E. E. Carrier
John P. Carter
Douglas Chamberlain
Cleo Chastain
O. H. Clements
Douglas Collins
George E. Cox
John M. Crowell
Tolbert C. Crowell
Doyle E. Currey
J. Tom Currey
O. M. Derryberry
Robt. G. Demos
James F. Dietrich
Paul H. Dietrich
Richard B. Donaldson
Albert S. Easley
A. F. Ebert
Robt. E. Eyssen
J. R. Fancher
E. Marlin Fitts
Richard Van Fletcher
A. G. Ford
Shelton F. Fowler
Guy M. Francis
J. E. Frazier
J. Marsh Frere
*J. Marsh Frere, Jr.
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G. C. Gibson
Robt. H. Giles, Jr.
E. Wayne Gilley
Dean W. Golley
Paul M. Golley
Kenneth M. Gould
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Alton G. Hair
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Foster Hampton, Jr.
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Carl A. Hartung
Chas. W. Hawkins
Freeman C. Hays
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Raymond D. Henderson
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*Edward Lewis Johnson
Franklin Johnson
Joseph Johnson, Jr.
J. E. Johnson
J. Paul Johnson
J. Paul Johnson, Jr.
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Warren H. Kimsey
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Hiram A. Laws, Jr.
Stewart Lawwill
Stewart Lawwill, Jr.
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Hugh B. Magill, Jr.
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Cooper H. McCall
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Cecil E. Newell
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E. T. Newell, Jr.
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E. White Patton
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W. Houston Price
Maurice Pruitt
Joe Anne Quillian (Mbr. Sumner Co.)
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Chas. J. Ray
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Bernard Tepper
Jack Tepper
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Louis Ulin
Minnie Vance
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O. L. Von Canon
Arthur J. Von Werssowetz
James P. Wallace
Robert A. Waters
L. Spires Whitaker
S. H. Wood
James C. Wright
George G. Young
Guy Zimmerman

Hixon

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C. A. Clements
Raymond M. Price

Ooltewah

Eugene M. Ryan

Soddy

Raymond C. Haley, Jr.
E. L. Jenkins

HARDEMAN COUNTY

Bolivar

D. L. Brint
W. E. Lawrence
Edwin M. Levy
B. F. McAnulty
J. Knox Tate

Grand Junction

L. D. Pope

Middleton

W. C. Gibson

Whiteville
P. M. Bishop
Aubrey Richards

HARDIN COUNTY

Savannah
H. D. Blankenship, Jr.
J. W. Carroll
R. B. Deberry
O. C. Doty
Howard W. Whitaker
T. R. Williams

HAWKINS COUNTY

Bulls Gap
J. E. Kite
(Mbr. Greene Co.)

Church Hill
Warner L. Clark

Eidson
John M. Pearson

Rogersville
Wm. E. Gibbons
Walter L. Goforth
E. M. Henderson
C. C. Johnson
J. S. Lyons
W. H. Lyons

HAYWOOD COUNTY

Brownsville
H. L. Gilliland
W. D. Poston
Glenn T. Scott
David E. Stewart
John Thornton, Jr.
J. K. Welch, Jr.

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Lexington
R. M. Conger
C. J. Huntsman
W. C. Ramer

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Paris
Arthur Dunlap
R. Graham Fish
Harold H. Fry
H. G. Giddens
I. H. Jones
*Ambrose M. Langa
E. P. Mobley, Jr.
John E. Neumann
W. G. Rhea
Kenneth Ross
J. Ray Smith
C. D. Wilder

HICKMAN COUNTY

Centerville
Parker D. Elrod
(Mbr. Davidson Co.)
Ogle Jones
(Mbr. Davidson Co.)

HOUSTON COUNTY

Erin
O. S. Luton
(Mbr. Montgomery Co.)

HUMPHREYS COUNTY

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James T. Allen
J. C. Armstrong
H. C. Capps
Autry C. Emmert
Arthur W. Walker

JACKSON COUNTY

Gainesboro
W. T. Anderson
L. R. Dudney
Jack S. Johnson

*In Service

JEFFERSON COUNTY

Dandridge
Sam D. Sullenberger
(Mbr. Hamblen Co.)

Jefferson City
T. A. Caldwell
(Mbr. Knox Co.)
Sam C. Fain
(Mbr. Hamblen Co.)
Frank Milligan
(Mbr. Hamblen Co.)
Estle P. Muncy
(Mbr. Hamblen Co.)

Strawberry Plains
Robert Creech
(Mbr. Knox Co.)
R. M. Webster
(Mbr. Knox Co.)

White Pine
E. Dale Allen
(Mbr. Hamblen Co.)
E. R. Baker
(Mbr. Hamblen Co.)

JOHNSON COUNTY

Mountain City
Paul J. Bundy
R. O. Glenn

KNOX COUNTY

Concord
Malcolm Cobb
R. H. Duncan
B. D. Goodge

Corryton
A. D. Simmons

Fountain City
J. Gordon Smith

Knoxville
Eugene Abercrombie
Alton Absher
N. D. Acree, Jr.
(Mbr. Shelby Co.)
J. E. Acker, Jr.
I. Edward Acuff
Robert L. Akin
Chas. Armstrong
John W. Avera
Troy P. Bagwell
Robert M. Baker
O. E. Ballou
Floyd N. Bankston
Spencer Y. Bell
Walter H. Benedict
Chas. W. Black
Wade H. Boswell
H. O. Bourkard
M. C. Bowman
Jacob T. Bradsher
Robert Brashear
Robert Brimi
Clayton M. Brodine
Fred F. Brown, Jr.
Horace E. Brown
James A. Burdette
Chas L. Butler
*Richard Butler
John Burkhart
J. Ed Campbell
P. H. Cardwell
C. S. Carlson
Frederick W. Carr
L. G. Caylor
Jack Chesney
L. Warren Chesney
H. S. Christian
H. E. Christenberry
H. E. Christenberry, Jr.
K. W. Christenberry
W. F. Christenberry
C. L. Chumley
William E. Clark
Edward S. Clayton
H. G. Coker
Margherita C. Cook
Sam Cooper
M. L. Courtney
William R. Cross
Miles S. Crowder
J. P. Cullum
H. K. Cunningham
C. Harwell Dabbs
John Daugherty
Daniel Davis
Martin Davis
Oliver DeLozier
R. V. DePue
R. V. DePue, Jr.
W. A. DeSautelle
W. T. DeSautelle
A. W. Diddle
Sheldon Domm
W. F. Dorsey
James E. Downs
R. N. Duffy, Jr.
Chas. R. Earnest, Jr.
J. Gilbert Eblen
E. M. Edington
Edward W. Ellis
J. B. Ely
W. H. Enneis
W. B. Farris
Frank Faulkner
Mark P. Fecher
George H. Finer
*G. Wm. Gallivan
Frank B. Galyon
Joseph I. Garcia
Wm. H. Gardner
George L. Gee, Jr.
*Garrison Geller
Vivian Gibbs
W. D. Gibson
Robt. B. Gilbertson
Edgar L. Grubb
Glenn Grubb
John H. Hall
J. R. Hamilton
Walter S. E. Hardy
James P. Harmon
Benj. I. Harrison, Jr.
Eugene Haun
Louis A. Haun
J. T. J. Hayes, Jr.
M. L. Hefley
N. A. Henderson
George G. Henson
Zelna L. Herndon
Howard K. Hicks
Robert E. Higgins
Hubert C. Hill
Jesse C. Hill
John R. Hill
Oliver W. Hill, Jr.
Victor Hill
R. L. Hobart, Jr.
David F. Hoey
Leon C. Hoskins
George Turner Howard, Jr.
Moses Howard
Fred E. Hufstedler
Perry Huggin
E. C. Idol
Geo. Inge
C. E. Irwin
W. J. Irwin
A. L. Jenkins
Harry H. Jenkins
William S. Jones
Margaret Joyce
H. M. Kelso
John O. Kennedy
John F. Kesterson
Victor H. Klein, Jr.
Lamar Knight
Willis F. Kraemer
A. Hobart Lancaster
Robert F. Lash
F. K. Lawson
Robert P. Layman
Robert S. Leach
Walter J. Lee, Jr.
Rene Ledbetter
R. J. Leffler
John H. Lesher
Forest S. LeTellier
Felix Line
Mary Lee Line
Thomas B. Lomasney
Frank London
Geo. S. Mahan
Margaret Maynard
Bruce M. McCamphell
Roy McCrary
A. R. McCullough
M. D. McCullough
Alfred F. Miller
Edwin E. Miller
Foy B. Mitchell
John F. Mohr
Arthur Moler
Ralph H. Monger
J. L. Montgomery
John D. Moore
Marion Moore
Owen D. Moore
Joel C. Morris
J. F. Morrow
Arthur J. Muller
G. E. Murray
William S. Muse
J. B. Naive
Carl A. Nelson, Jr.
William A. Nelson
H. L. Neuenschwander
Robert Newman
Eugene P. Niceley
Hazel Nichols
Ralph Nichols
G. T. Novinger
Elvin B. Noxon
Kenneth A. O'Connor
Harry K. Ogden
Homer Ogle
B. M. Overholt
Nicholas Pappas
Robert F. Patterson, Jr.
F. H. Payne
E. Converse Peirce
Ira S. Pierce
Herschel Penn
Jarrell Penn
H. Dewey Peters
B. F. Peterson
Cecil E. Pitard
S. Joe Platt
Herbert L. Pope
W. W. Potter
William F. Powell
Bruce Powers
Wilson Powers
H. Hammond Pride
James C. Prose
J. B. Purkall, Jr.
John A. Range
Joe L. Raulston
Freeman Rawson
W. Gilmer Reed
Wm. H. Reeder
Paul D. Richards
N. G. Riggins
Frank Rogers
Wm. K. Rogers
Kenneth Rule
Richard C. Sexton
J. H. Saffold
Wm. A. Shelton
Alex B. Shipley
Elton E. Shouse, Jr.
Kenneth Shoemaker
E. Chas. Sienknecht
Frank J. Slemons
Chas. C. Smeltzer
E. B. Smith (Mbr. Anderson-Campbell)
Joe T. Smith
Vernon I. Smith
W. E. Smith
John R. Smoot
James L. Southworth
J. M. Stockman
J. Hooper Stiles
Thos. Stevens
Wm. K. Swann, Jr.
R. G. Tappan
E. L. Tauxe
George W. Tharp
D. R. Thomas
Philip Thomas
Wm. M. Tipton
Lucian Trent
Geo. M. Trotter
M. Frank Turney
Sidney L. Wallace
C. L. Walton
R. G. Waterhouse
David H. Waterman
Alvin J. Weber, Jr.
Roy A. Wedekind, Jr.
Fred West
Roger E. White
W. L. Whitehurst
Richter H. Wiggall
Richard C. Willingham
G. A. Williamson, Jr.
Perry Williamson
Leon J. Willien
J. D. Winebrenner
R. B. Wood
Vincent T. Young
Eugene G. Zachary
Charles R. Zirkle
George Zirkle

Mascot
Joseph K. Seale, Jr.

Powell Station
L. F. Cruze

LAKE COUNTY

Ridgely
W. B. Acree
J. T. Jabbour

Tiptonville
J. R. Holefield
W. T. Ramey
E. B. Smythe

LAUDERDALE COUNTY

Halls
Jack T. Elmore
J. G. Olds
(Mbr. Dyer, Lake & Crockett)

Ripley
W. F. David
J. L. Dunavant
Landrum S. Tucker
Charles R. Webb
Claud M. Williams

LAWRENCE COUNTY

Lawrenceburg
V. H. Crowder
W. O. Crowder
J. W. Danley
Boyd P. Davidson
Leo C. Harris, Sr.
L. B. Molloy
V. L. Parrish
Carson E. Taylor

Loretto
Ray E. Methvin
M. H. Weathers

LEWIS COUNTY

Hohenwald
William E. Boyce
(Mbr. Maury Co.)

LINCOLN COUNTY

Fayetteville
W. T. Boyer
L. M. Donaldson
Randolph A. Cate
Helen G. Jones
William D. Jones
Ben H. Marshall
R. E. McCown
J. V. McRady
T. A. Patrick, Jr.

LOUDON COUNTY

Lenoir City
Harold D. Freedman
(Mbr. Knox Co.)
Hughes Johnson
(Mbr. Knox Co.)
J. A. Leeper
(Mbr. Knox Co.)
R. V. Taylor
(Mbr. Knox Co.)

Loudon
Corrie Blair
(Mbr. Knox Co.)
Samuel H. Harrison
W. B. Harrison
(Mbr. Knox Co.)
Wm. T. McPeake
(Mbr. Knox Co.)
J. R. Watkins
(Mbr. Knox Co.

MACON COUNTY

Lafayette
C. C. Chitwood, Jr.
R. D. Foster
E. M. Froedge
Max E. Painter
(Mbr. Sumner Co.)
John R. Smith

MADISON COUNTY

Bemis
Kelly Smythe
Allen N. Williams, Jr.

Jackson
J. G. Anderson
Thomas K. Ballard
G. H. Berryhill
Wm. H. Brooks
Swan Burrus
Swan Burrus, Jr.
Hughes Chandler
Tate B. Collins
Stanley E. Crawford
Wm. G. Crook
G. B. Dodson
J. E. Douglass
Roy A. Douglass, Jr
E. W. Edwards
Fred M. Friedman
W. T. Fitts
Oliver Graves
W. W. Harrison
Geo. Harvey, Jr.
Henry H. Herron
S. M. Herron
C. L. Holmes
G. B. Hubbard
Leland M. Johnston
Chester K. Jones
G. Frank Jones
Duval H. Koonce
Harold T. McIver
Frank A. Moore
H. N. Moore
Lamb B. Myhr
R. M. Neudecker
John B. Nuckolls
J. C. Pearce
J. E. Powers
John G. Riddler
Wm. H. Roberts
Norris Shelton
Charles C. Stauffer
J. R. Thompson, Jr.
Barbara Truex
S. Allen Truex
Charles F. Webb
Charles H. Webb
George B. Wyatt
Paul E. Wylie

MARION COUNTY

Jasper
J. G. McMillan
(Mbr. Hamilton Co.)
David H. Turner
(Mbr. Hamilton Co.)

South Pittsburg
J. B. Hayron
(Mbr. Hamilton Co.)
William Headrick, Jr.
(Mbr. Hamilton Co.)
Viston Taylor
(Mbr. Hamilton Co.)

Whitwell
Wm. G. Shull
(Mbr. Hamilton Co.)

MARSHALL COUNTY

Belfast
H. A. Morgan, Jr.
(Mbr. Bedford Co.)

Lewisburg
Kenneth Brown
(Mbr. Bedford Co.)
J. T. Gordon
(Mbr. Bedford Co.)
J. C. Leonard
Mbr. Maury Co.)
W. S. Poarch
(Mbr. Bedford Co.)
J. W. Rutledge
(Mbr. Maury Co.)
Jack S. Springer
(Mbr. Giles Co.)

MAURY COUNTY

Columbia
D. B. Andrews
Wendell C. Bennett
Mildred Casey
William N. Cook
Edward Ewton
Wm. G. Fuqua
C. C. Gardner, Jr.
Daniel Gray, Jr.
Harry C. Helm
Robin Lyles
Clay R. Miller
James B. Miller
Edwin K. Provost
Warren Rucker
Leon S. Ward

J. W. Wilkes, Jr.
Eleanor Williamson
Watt Yeiser
Thomas K. Young, Jr.

Mt. Pleasant

G. C. English
J. H. Jones
Charles Petty
C. D. Walton

McMINN COUNTY

Athens

W. R. Arrants
Charles T. Carroll
L. D. Curtner
R. W. Epperson
C. O. Foree
W. Edwin Foree
Milnor Jones
J. A. Powell, Jr.
Edward B. Ranck
Helen M. Richards
A. W. Shelamar
L. H. Shields

Englewood

Robt. G. Hewgley

Etowah

S. Boyd McClary, Jr.
John C. Sharp
Oscar L. Simpson
H. P. Whittle

McNAIRY COUNTY

Selmer

T. N. Humphrey
W. A. Phillips
Montie E. Smith, Jr.

MEIGS COUNTY

Decatur

William Davis

MONROE COUNTY

Madisonville

Holden W. Hooper
R. C. Kimbrough
L. Houston Lowry
Horace M. McGuire

Sweetwater

J. H. Barnes
W. J. Cameron
Joe H. Henshaw
D. F. Heuer, Jr.
T. A. Lowry
J. E. Young

MONTGOMERY COUNTY

Clarksville

Edward R. Atkinson
Carlos B. Brewer
E. P. Cutter
Sam M. Doane, Jr.
V. H. Griffin
B. T. Iglehart
Cecil C. Lawhorn
J. H. Ledbetter, Jr.
Arthur A. McMurray
William G. Lyle
Fred Reynolds
Jack Ross
Bryce F. Runyon
A. F. Russell
M. L. Shelby
Marion E. Spurgeon
Nancy Jones Tosh
Robt. H. Tosh
Charles A. Trabern
Troy A. Walker
Paul E. Wilson
R. M. Workman

MOORE COUNTY

Lynchburg

F. Harlan Booher
(Mbr. Lincoln Co.)

MORGAN COUNTY

Oakdale

J. H. Carr
(Mbr. Roane Co.)

*In Service

Wartburg

Curtis McCammon
(Mbr. Roane Co.)

OBION COUNTY

Hornbeak

R. G. Latimer

Kenton

Alden H. Gray
(Mbr. Consolidated Cos.)

Obion

Leon I. Runyon

Troy

Chesley H. Hill

Union City

J. Kelly Avery
M. A. Blanton, Jr.
Stevens Byars
Wm. N. Carpenter
Robt. M. Darnall
B. O. Garner
R. L. Gilliam, II
E. P. Kingsbury, Jr.
R. G. Latimer, Jr.
E. McCall Morris
James W. Polk
Malcolm T. Tipton

OVERTON COUNTY

Livingston

H. B. Nevans
Denton Norris
A. B. Qualls
Donald M. Qualls
F. L. Sidwell

PERRY COUNTY

Linden

B. L. Holladay
Gordon H. Turner, Jr.

Lobelville

*Ewing W. McPherson

PICKETT COUNTY

Byrdstown

Malcolm E. Clark
(Mbr. Overton Co.)

POLK COUNTY

Benton

John H. Lillard
(Mbr. McMinn Co.)

Copperhill

W. Y. Gilliam
(Mbr. Hamilton Co.)
H. H. Hyatt
(Mbr. Hamilton Co.)
I. I. Layne
(Mbr. Hamilton Co.)

Ducktown

C. Windom Kimsey
(Mbr. Hamilton Co.)

PUTNAM COUNTY

Algood

J. T. Moore, Jr.

Cookeville

Jack L. Clark
J. T. Deberry
Lex Dyer
Kenneth L. Haile
Wm. A. Hensley, Jr.
W. A. Howard
Jere W. Lowe
William Mattson
Thurman Shipley
Wm. S. Taylor
J. Fred Terry

Granville

L. M. Freeman

Monterey

C. A. Collins
T. M. Crain

RHEA COUNTY

Dayton

Albert C. Broyles
(Mbr. Hamilton Co.)
James L. Mathis
I. J. Rodgers
(Mbr. Hamilton Co.)
W. A. Thomison
(Mbr. Hamilton Co.)

Spring City

Conrad L. Grabeel
Mae E. Potter
(Mbr. Hamilton Co.)

ROANE COUNTY

Harriman

Thomas L. Bowman
Fred J. Hooper
H. Stratton Jones
L. A. Killeffer
John R. Sisk

Kingston

P. M. Dings
Carl Henry
Chas. W. Moorefield
Nat Sugarman

Oak Ridge

(See Anderson Co.)
Gould A. Andrews
Lawrence Ball
Robt. P. Ball
R. R. Bigelow
Velta F. Briuks
Marshall Brucer
Chas. Congdon
Betty Cooper
John P. Crews
Dexter Davis
John DePersio
Robt. E. DePersio
J. L. Diamond
Harry Dickson
T. Guy Fortney
William P. Hardy
J. M. Hays
William Holden
R. A. Johnson
Harvey Keese, Jr.
Avery P. King
Jane Koll
Thomas A. Lincoln
Lynn F. Lockett
Joseph S. Lyon
Paul R. Marsh
Dana Nance
Etna Little Palmer
Elmer L. Parrott
Lewis F. Preston
William Pugh
Charles J. Ragan
Thos. L. Ray
Anne W. Robinson
Hyman Rossman
Richard Rucker
Henry B. Ruley
Paul E. Spray
C. Harold Steffee
Charles R. Sullivan
Daniel M. Thomas
Arthur Upton
Gino F. Zanolli

Oliver Springs

S. J. Van Hook
Fred O. Stone
(Mbr. Anderson-Campbell Co.)

Rockwood

Robert S. Hicks
R. F. Regester
Geo. Shacklett
G. E. Wilson

ROBERTSON COUNTY

Cedar Hill

R. H. Elder

Springfield

John S. Freeman
J. S. Hawkins
J. M. Jackson
A. R. Kempf
N. H. Raines
W. P. Stone
J. E. Wilkison

RUTHERFORD COUNTY

Eagleville

W. R. C. Stewart, Jr.

Murfreesboro

Carl E. Adams
W. Stanley Barham
Joseph O. Berkley
J. B. Black
I. T. Boykin
B. S. Davison, Jr.
S. C. Garrison, Jr.
Gilbert Gordon
Sam H. Hay
R. D. Hollowell
A. J. Jamison
J. K. Kaufman
Lois M. Kennedy
M. B. Murfree, Jr.
Eugene P. Odom
Charles K. Rath, Jr.
B. W. Rawlins
Wm. W. Shacklett
James W. Tenpenny
Sam L. Wiles

Smyrna

George Goodall
James Lee Moore

SCOTT COUNTY

Norma

D. T. Chambers

Oneida

W. S. Cooper
M. F. Frazier
H. M. Leeds
Roy McDonald
M. E. Thompson
Milford Thompson

SEQUATCHIE COUNTY

Dunlap

Charles Graves
(Mbr. Hamilton Co.)
C. Clifford Ludington, Jr.
(Mbr. Hamilton Co.)

SEVIER COUNTY

Gatlinburg

Ralph H. Shilling
Bruce H. Sisler

Sevierville

Troy J. Beeler
R. A. Broady
R. A. McCall
*Edward Perkins
Robert F. Thomas
J. R. VanArsdall
C. P. Wilson
O. H. Yarberry
*O. H. Yarberry, Jr.

SHELBY COUNTY

Arlington

Malcolm A. Baker

Collierville

L. P. Pearce
R. F. Kelsey

Cordova

C. A. Chaffee

Forest Hill

J. E. Clark

Germantown

John T. Carter, Jr.

Memphis

Robert F. Ackerman
John Q. Adams
L. H. Adams
W. M. Adams
Justin H. Adler
James E. Alexander
C. D. Allen
Chester G. Allen
T. Pearson Allen
Frank S. Allen
F. H. Alley
Jacob Alperin
James L. Alston
Sam P. Anderson, Jr.
S. B. Anderson
William F. Andrews
D. H. Anthony
*Robert A. Anthony
Blake Arnoult
J. M. Aste
H. E. Atherton
Leland L. Atkins
Edgar L. Austin
W. W. Aycock
J. C. Ayres, Jr.
C. O. Bailey
John W. Baird
J. Earl Baker
Malcolm E. Baker
George T. Bale
A. L. Ball
Aden W. Barlow
James R. Barr
G. H. Bassett
Paul Batson, Jr.
Arthur L. Bellott, Jr.
Charles A. Bender
Hal F. Bennett
B. F. Benton
J. M. Bethea
Ralph C. Bethea
James D. Biles, Jr.
W. A. Bisson
W. T. Black, Jr.
Sam Blackwell
Basil A. Bland, Jr.
Breen Bland
C. D. Blassingame
Phil Bleecker
Robert F. Bonner
Howard A. Boone
James L. Booth
C. Whitman Borg
R. L. Bourland
R. L. Bowlin
Earl P. Bowerman
H. B. Boyd
Winston Braun
R. R. Braund
James T. Bridges
James N. Brien, Jr.
Carey Bringle
Lewis P. Britt, Jr.
D. A. Broady
Joseph H. Brock
J. M. Brockman
I. H. Bronstein
Maury Bronstein
C. W. Brown
Harry G. Bryan
Malvern T. Bryan
Samuel Bryan
K. M. Buck
J. A. Buchignani
W. D. Burkhalter
Geo. H. Burkle, Jr.
Orin D. Butterick, Jr.
R. A. Calandruccio
Edward G. Caldwell
M. K. Callison
E. Guy Campbell
Ernest A. Canada
Dominic J. Cara, Jr.
B. W. Cannon
Robert S. Caradine, Jr.
D. M. Carr
David S. Carroll
Dan Carruthers, Jr.
Harvey W. Carter
L. L. Carter
Sam C. Carter
A. J. Cates
A. H. Chamberlain, Jr.
J. M. Chambers, Jr.
W. C. Chaney
Fenwick W. Chappell
R. E. Ching
Joseph M. Chisholm
Charles L. Clarke
James A. Clark, Jr.
Lewis B. Clayton
E. W. Cocke, Jr.
Lawrence L. Cohen
M. D. Cohen
Max H. Cohen
W. C. Colbert
F. H. Cole
B. C. Collins
James H. Collins
Frank H. Collins
E. D. Connell
John P. Conway
George A. Coors
Giles A. Coors
Arthur A. Cox
Erwin M. Cox
John E. Cox
E. A. Crawford
Loyd V. Crawford
P. T. Crawford
A. H. Crenshaw
J. A. Crisler, Jr.
C. V. Croswell
Alvin J. Cummins
Orin L. Davidson
J. M. Davis
R. A. Davison
Charles J. Deere
V. J. Demarco
W. E. Denman
McCarthy DeMere
Richard DeSaussure
Alice R. Deutsch
J. L. Dies
L. W. Diggs
W. T. Dinsmore
John B. Dorian, Jr.
Thomas G. Dorrity
Chas. V. Dowling
Paul T. Drenning
Horton DuBard
*W. D. Dunavant
I. G. Duncan
James T. Duncan, Jr.
Elmer S. Eddins
E. U. Epstein
Cyrus C. Erickson
James N. Etteldorf
C. Barton Etter
O. A. Eubanks, Jr.
J. D. Evans
M. L. Evans
H. B. Everett
B. F. Everett, Jr.
Harold G. Farley
Turley Farrar
Harold Feinstein
W. C. Ferrell
Burt Friedman
Daniel F. Fisher
*J. C. Flaniken
R. B. Flaniken
J. H. Francis
W. Edward French
Eugene W. Gadberry
J. A. Gardner, Jr.
Dan C. Gary
Elsbeth Gehorsam
W. S. Gilmer, Jr.
Frederick Gioria
C. E. Gilliespie
George E. Gish
Thomas C. Gladding
C. H. Glover
Fred A. Goldberg
Ralph Goldman
Lester I. Goldsmith
D. W. Goltman
J. S. Goltman
J. O. Gordon
H. B. Gotten
Nicholas Gotten
Robert D. Gourley
W. H. Gragg
W. H. Gragg, Jr.
H. D. Gray
Arthur W. Green
C. R. Green
Jack Greenfield
A. J. Grobmyer, Jr.
Pauline Grodsky
N. W. Guthrie
Lillian Hadsell
James S. Haimsohn
E. R. Hall
V. A. Hall
Margaret A. Halle
J. F. Hamilton
John Hamsher
Albert M. Hand
Howard B. Hasen
B. F. Hardin
J. H. Harris
Hoyt C. Harris
(Mbr. Warren Co.)
Mallory Harwell
Harry Haugen
A. Kenneth Hawkes
C. D. Hawkes
Jean M. Hawkes
Rowland D. Hawkins
C. I. Hay
James E. Hayes
L. K. Haynes
C. H. Heacock
J. P. Henry
A. L. Herring
George B. Higley
*Fontaine S. Hill
*James M. Hill
J. J. Hobson
John Lewis Hobson
W. K. Hoffman, Jr.
M. W. Holehan
J. E. Holmes
Hubert L. Hotchkiss
C. H. Householder
John L. Houston
Lewis T. Howard

William T. Howard
A. G. Hudson
Joe Hufstedler
James G. Hughes
John D. Hughes
Max O. Hughes
John V. Hummell
W. E. Hurt
William W. Hurteau
J. H. Ijams
C. W. Ingle
A. J. Ingram
Thos. M. Jackson
H. J. Jacobson
C. E. James
D. H. James
David H. James, Jr.
Hal P. James
J. A. James
Oliver C. Jeffers
W. D. Jensen
Anthony P. Jerome
Donald A. Johnson
J. Don Johnson
A. M. Jones
George P. Jones, Jr.
Halvern H. Johnson
Harry Johnson
Robert G. Jordan
A. Wilson Julich
L. A. Kasselberg
Harvey L. Kay, Jr.
Marvin M. Keirns
Ernest G. Kelly
Henry G. Kessler
Billy W. King
Charles M. King
J. C. King
T. A. Kirkland
W. F. Klotz
R. A. Knight
Sheldon B. Korones
Bernard M. Kraus
Melvin M. Kraus
Cary M. Kuykendall
N. W. Kuykendall, Jr.
J. Warren Kyle
H. Z. Landis
C. G. Landsee
H. G. Lanford
Gene M. Lasater
O. M. Laten
Frank A. Latham
M. W. Lathram
E. A. Laughlin
H. G. LaVelle, Jr.
Robert E. Lawson
Gilbert J. Levy
L. C. Lewis
P. M. Lewis
Alys H. Lipscomb
Geo. R. Livermore, Jr.
D. G. Lockwood
Charles E. Long
J. H. Lotz
J. C. Lougheed
Carruthers Love
Martha A. Loving
George S. Lovejoy
William Lovejoy
Edward H. Mabry
W. F. Mackey
Holt B. Maddox
*Chas. K. Mahaffey
Battle Malone II
T. P. Manigan
Philip M. Markle
M. M. Marolla
Carl D. Marsb
C. H. Marshall
Tinnin Martin, Jr.
W. S. Martin
A. D. Mason, Jr.
Charles R. Mason
J. W. Mason
Rohin F. Mason
Wm. W. Mason
Gordon L. Mathes
O. S. Matthews
William P. Maury
R. F. Mayer
L. H. Mayfield
J. E. Meadors
A. H. Meyer
A. H. Meyer, Jr.
Robert M. Miles
Lee W. Milford, Jr.
C. W. Miller, Jr.
Fox Miller
Harold R. Miller
Richard A. Miller

———

*In Service

Richard Braun Miller
Richard W. Miller
Dan C. Mills
*George T. Mills
J. Purvis Milnor
W. D. Mims
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George McPherson
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J. C. Orman
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Cumberland City

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Dover

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Kingsport

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M. J. Adams
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W. A. Tyler
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Westmoreland

Kermit Jones

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J. C. Witherington
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Munford

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Ira N. Kelley (Mbr. Sumner Co.)

UNICOI COUNTY

Erwin

R. H. Harvey
H. L. Monroe
Earl Peterson

VAN BUREN COUNTY

Spencer

Margaret Wrenn Rhinehart

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McMinnville

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T. J. Ellis
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WAYNE COUNTY

Waynesboro

Dexter L. Woods
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Ed. H. Welles
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Donald Bradley
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Lebanon

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J. M. Ousley, Maryville — Blount
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C. E. Brush, 2320 West End Ave. — Davidson
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P. C. Tipton, Dyersburg — Dyer, Lake and Crockett
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J. H. Barnett, Sopchoppy, Florida — Hamilton
O. L. Blackwell, 6578 East Brainerd Rd., Chattanooga — Hamilton
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J. A. Gentry, Altura Drive, Signal Mountain, Chattanooga — Hamilton
H. H. Hampton, Signal Mountain, Chattanooga — Hamilton
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R. E. Shelton, 3609 Twelfth Avenue, Chattanooga — Hamilton
John B. Steele, 106 Morningside Drive — Hamilton
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J. C. Fly, Centerville — Hickman
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W. R. Webb, Hampshire — Maury
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B. H. Woodard, Spring Hill — Maury
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George P. Zirkle, Kingston — Roane
Jame P. Ely, Centerville — Roane
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Shields Abernathy, 350 So. Highland, Memphis — Shelby
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G. E. Anderson, 1271 East Parkway, So. Memphis — Shelby
Gus Ankerson, 1271 East Parkway So., Memphis — Shelby
J. L. Beauchamp, 1051 Madison Ave., Memphis — Shelby
L. F. Boyd, 2067 Hallwood Drive, Memphis — Shelby
W. F. Boyd, Cordova — Shelby
Wm. Britt Burns, 4125 Monticello, Abilene, Texas — Shelby
J. P. Carter, 649 White Station Road, Memphis — Shelby
Casa Collier, 629 Rozelle, Memphis — Shelby
T. N. Coppedge, 1807 Harbert, Memphis — Shelby
R. R. Davenport, 1853 Snowden, Memphis — Shelby
George Gartley, Florida Sanitarium, Orlando, Fla. — Shelby
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H. B. Jacobson, 114 No. McLean Ave., Apt. 2, Memphis — Shelby
C. C. King, 1475 Linden, Memphis — Shelby
V. D. King, 1037 North Parkway, Memphis — Shelby
N. E. Leake, Shelby County Hospital, Memphis — Shelby
Geo. R. Livermore, Sr., 1705 Massey Road, Germantown — Shelby
W. H. Lovejoy, 511 South Parkway, East, Memphis — Shelby
J. E. Meadors, 3383 Summer Ave., Memphis — Shelby
E. G. Meriwether, 3669 Northwood Drive — Shelby
E. McCann, Batesville, Miss. — Shelby
J. A. McIntosh, Col. Mut. Tower, Memphis — Shelby
J. B. McNulty, 217 Stonewall, Memphis — Shelby
L. C. McVay, Marion, Arkansas — Shelby
R. H. Miller, Parker Avenue, Nashville — Shelby
Moore Moore, Sr., 1222 Union Ave., Memphis — Shelby
Wallace Moore, 1161 Ravnor, Memphis — Shelby
J. L. Morgan, Commerce Title Bldg., Memphis — Shelby
G. W. Musgraves, 1243 So. Wellington, Memphis — Shelby
Edwin M. Peete, 45 So. Barksdale, Memphis — Shelby
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L. V. Schmittou, 1304 Central Blvd., Brownsville, Texas — Shelby
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Percy H. Wood, Co. Mut. Tower Bldg., Memphis — Shelby
Ed. D. Gross, Chestnut Mound — Smith
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V. B. English, 26 4th St., Bristol, Tenn.	Sullivan-Johnson
Arthur Hooks, 26 4th St., Bristol, Tenn.	Sullivan-Johnson
A. K. Husband, Med. Arts Bldg., Kingsport	Sullivan-Johnson
W. W. Rippy, Collinwood	Wayne
Alan K. Turner, 200 Soler St., Bristol, Va.	Sullivan-Johnson
A. J. Willis, Jonesboro	Washington-Carter-Unicoi
John L. Hankins, Johnson City	Washington-Carter-Unicoi
U. G. Jones, Johnson City	Washington-Carter-Unicoi
Helen D. Wofford, Johnson City	Washington-Carter-Unicoi
R. W. Brandon, Sr., Martin	Weakley
H. G. Edmondson, Martin	Weakley

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Leslie R. Lingeman, Maryville	Blount
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Mayne B. McCrary, Woodbury	Cannon
W. O. Baird, Henderson	Chester
J. E. Hampton, Newport	Cocke
R. A. Barr, Gallatin, RFD #4	Davidson
Leon M. Lanier, Nashville	Davidson
J. Owsley Manier, Nashville	Davidson
R. H. Miller, Nashville	Davidson
Lloyd Pilkinton, Nashville	Davidson
Sam T. Ross, Nashville	Davidson
W. D. Sumpter, Sr., Nashville	Davidson
Fred L. Webb, Nashville	Davidson
John E. Carne, Dyersburg	Dyer
J. H. Nunn, Dyersburg	Dyer
J. P. Moon, Winchester	Franklin
Claude P. Fox, Jr., Greeneville	Green
W. E. Howell, Morriston	Hamblen
S. A. Fowler, Wildwood, Ga.	Hamilton
S. H. Long, Chattanooga	Hamilton
J. D. L. McPheeters, Chattanooga	Hamilton
J. B. Phillips, Chattanooga	Hamilton
Fred B. Stapp, Chattanooga	Hamilton
W. W. Winters, Bolivar	Hardeman
Otis Whitlow, Savannah	Hardeman
B. I. Harrison, Knoxville	Knox
Walter Luttrell, Knoxville	Knox
R. G. Tappan, Knoxville	Knox
E. E. Miller, Ripley	Lauderdale
Arthur P. Harrison, Loudon	Loudon
C. O. Fowler, Spring Hill	Maury
Clarence S. Morrow, Columbia	Maury
A. J. Guinn, Ducktown	Polk
W. W. Hill, Harriman	Roane
C. P. Wilson, Sevierville	Sevier
Jewell M. Dorris, Memphis	Shelby
H. R. Raines, Memphis	Shelby
W. H. Reed, Kingsport	Sullivan
M. G. Rock, Bristol, Va.	Sullivan
T. B. Yancey, Kingsport	Sullivan
Seymour Pelzer, Bristol, Va.	Sullivan
Jesse P. David, Covington, RFD #5	Tipton
John R. Moody, Erwin	Unicoi
R. L. Maloney, McMinnville	Warren
C. W. Brabson, Jonesboro	Washington
F. Davis Owings, Johnson City	Washington

MEMBERS RESIDING OUTSIDE OF TENNESSEE

Thomas E. Adkins, 806 Adabis Road	Rossville, Ga.
I. R. Banks, 203½ Chickamauga Ave.	Rossville, Ga.
Edgar Branyon, 1529 North 25th Street	Birmingham, Ala.
Catherine E. Coleman, Brazoria Co. Health Dept., Old Court House	Angleton, Texas
Martin J. Costello, 862 - 2nd Avenue	Neptune Beach, Fla.
Rufus Craven, 119 Glenwood Avenue	Cincinnati, Ohio
E. B. Cunningham, Med. Dept., Armco Steel Corp.	Middletown, Ohio
Jock L. Graeme, 556 Morris Ave.	Summit, N. J.
Ernest Guy, 826 Dodge	Iowa City, Iowa
Axel C. Hansen, Charlotte Amolie	Virgin Islands
John R. Henry, 2312 Pine St.	Seattle, Wash.
James H. Hickman, Jr., 5141 West 21st St.	Hays, Kansas
Major John M. Higgason, c/o Wm. Beaumont Army Hospital, Box 109	El Paso, Texas
Marshall D. Hogan, Jr., Capt., 04023334, U. S. Army Hospital, Nurnberg, APO 696	New York C., N. Y.
Wm. W. Hurteau, Dept. of Pathology, Methodist Hospital	Indianapolis, Ind.
Robert T. Jackson, Doctors Bldg.	Charlotte, N. C.
Fred E. Jenkins, 393 - 7th Avenue	New York, N. Y.
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